



Speed

ACCURACY

/

SPEED

/

RESPONSIBILITY

/

COOPERATIVE

F1~F2	FACE MILL CUTTER	F25~F26	UNIVERSAL END MILLS
F3~F7	END MILLS/MILLING CUTTER	F27	FINISHING END MILLS
F7	CUTTING HOLDER/CUTTING BLOCKS	F28	BALL NOSE END MILLS
F8~F11	TOOL HOLDER FOR LATHE	F29	END MILLS FOR ALUMINIUM/ FINISHING END MILLS
F12~F13	BORING BAR	F30	BALL NOSE END MILLS/ ROUGHING END MILLS
F14	TECHNICAL DATA	F31~F32	TWIST DRILLS
F15	INSERT FOR FACE MILL CUTTER	F33~F35	HIGH PERFORMANCE DRILLS
F16~E17	SOLID CARBIDE END MILLS	F36	COMBINED DRILL AND COUNTERSINK/ MACHINE REAMERS LONG LENGTH
F18	SOLID CARBIDE BALL NOSE END MILLS	F37~F38	ENE MILLS WIT CORNER RUDIUS
F19	SOLID CARBIDE END MILLS	F39	HAND REAMERS-HSS ADJUSTABLE REAMERS
F20	SOLID CARBIDE NC/CNC SPOT DRILLS	F40	OUDSIDE RADIUS SHAPR END MILLS COUNTERBORE END MILLS
F21~F22	FINISHING END MILLS/ BALL NOSE END MILLS	F41	T-SLOT MILLING CUTTERS METAL SLITTING SAWS
F23~F24	MACHINE REAMERS IN STEPS OF 0.5MM/ MACHINE REAMERS CARBIDE TIPPED		

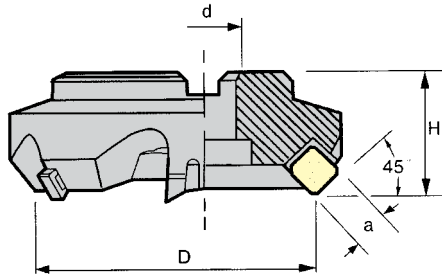
CUTTING TOOL



Face Milling Cutter 45°



45°



ORDER NO.	D	dØ		H	BLADE	WEIGHT(kg)		CODE NO.
		INCH	METRIC			INCH	METRIC	
SE545-3	80	25.4	27	50	5	2.1	1.8	6001-001
SE545-4	100	31.75	32	55	5	3.5	2.9	6001-002
SE545-5	125	38.1	40	60	6	5.1	4.8	6001-003
SE545-6	160	50.8	40	60	8	7.1	6.8	6001-004
SE545-8	200	47.625	60	60	10	10.4	9.7	6001-005
SE545-10	250	47.625	60	60	12	16.8		6001-006
SE545-12	300	47.625	60	60	14	27		6001-007
SE445-3	80	25.4	27	50	5	2.1	1.8	6001-020
SE445-4	100	31.75	32	55	5	3.2	3	6001-021
SE445-5	125	38.1	40	60	6	4.7	4.9	6001-022
SE445-6	160	50.8	40	60	8	7.3	7	6001-023
SE445-8	200	47.625	60	60	10	9.6	8.4	6001-024
SE445-10	250	47.625	60	60	12	16.7	17	6001-025
SE445-12	300	47.625	60	60	14	25.8	25.8	6001-026

PARTS

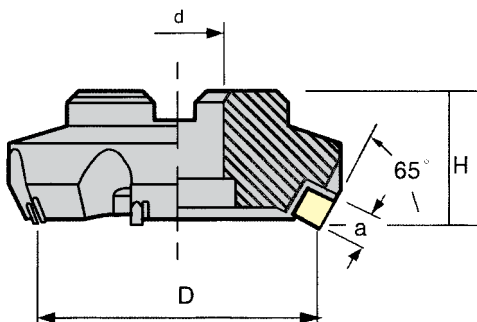
SCR-CL5/16	CL-S	SCR-ST-S4	ST-S	WRN-M4T

INSERT

445 LIGHT DUTY		545 HEAVY DUTY	
SEKN-1203		SEKN-1504	

Face Milling Cutter 65°

65°



ORDER NO.	D	dØ		H	BLADE	WEIGHT(kg)		CODE NO.
		INCH	METRIC			INCH	METRIC	
SP535-3	80	25.4	27	50	5	2.1	1.6	6001-040
SP535-4	100	31.75	32	55	5	3.3	2.7	6001-041
SP535-5	125	38.1	40	60	6	5.6	4.6	6001-042
SP535-6	160	50.8	40	60	8	7.4	6.9	6001-043
SP535-8	200	47.625	60	60	10	10.2	10.1	6001-044
SP535-10	250	47.625	60	60	12	17.5		6001-045
SP535-12	300	47.625	60	60	14			6001-046
SP435-3	80	25.4	27	50	5	2.1	2.3	6001-070
SP435-4	100	31.75	32	55	5	3.3	2.7	6001-071
SP435-5	125	38.1	40	60	6	5.5	4.5	6001-072
SP435-6	160	50.8	40	60	8	7.8	6.8	6001-073
SP435-8	200	47.625	60	60	10	10.1		6001-074
SP435-10	250	47.625	60	60	12	17.5		6001-075
SP435-12	300	47.625	60	60	14	26.8		6001-076

PARTS

SCR-CL5/16	CL-S	SCR-ST-S4	ST-S	WRN-M4T

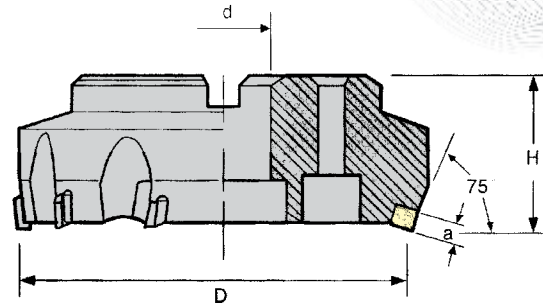
INSERT

435 LIGHT DUTY		535 HEAVY DUTY	
SPKN-1204		SPKN-1504	

Face Milling Cutter 75°



75°

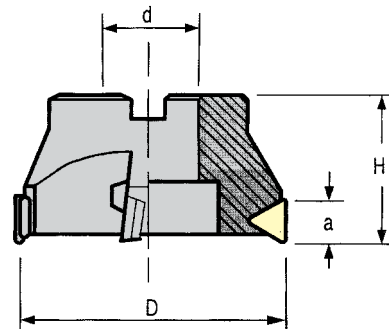


ORDER NO.	D	dØ		H	BLADE	WEIGHT(kg)		CODE NO.
		INCH	METRIC			INCH	METRIC	
FP-3	80	25.4	27	50	5	2	1.5	6001-090
FP-4	100	31.75	32	55	6	3.1	2.5	6001-091
FP-5	125	38.1	40	60	8	5.3	4.4	6001-092
FP-6	160	50.8	40	60	10	6.5	6.4	6001-093
FP-8	200	47.625	60	60	12	9.6	8.6	6001-094
FP-10	250	47.625	60	60	16	17.1		6001-095
FP-12	300	47.625	60	60	20	29.3		6001-096

INSERT	PARTS				
SPUN-120308 SPKM-1203EDR					
 12.7 15 11 3.2	SCR-CL5/16	CL-S	SCR-ST-S4	ST-S	WRN-M4T

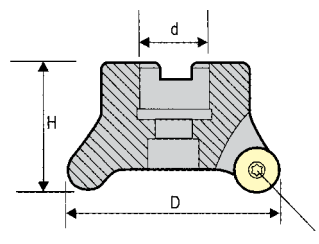
Face Milling Cutter 90°

90°



ORDER NO.	D	dØ		H	a	BLADE	WEIGHT(kg)	INSERT					CODE NO.
		INCH	METRIC										
TP-63	63	25.4	27	50	22	3	1.1	TPMN 2204 TPKN 2204PPR	ST-T	SCR-W5/16	WRN-M5T	SCR-ST-T4	6001-110
TP-80	80	25.4	27	50	22	4	1.5		ST-T	SCR-W5/16	WRN-M5T	SCR-ST-T4	6001-111
TP-100	100	31.75	32	55	22	5	2.2		ST-T	SCR-W5/16	WRN-M5T	SCR-ST-T4	6001-112
TP-125	125	38.1	40	60	22	6	3.5		ST-T	SCR-W5/16	WRN-M5T	SCR-ST-T4	6001-113
TP-160	160	50.8	40	60	22	7	5.9		ST-T	SCR-W5/16	WRN-M5T	SCR-ST-T4	6001-114
TP-200	200	47.625	60	60	22	8	8.1		ST-T	SCR-W5/16	WRN-M5T	SCR-ST-T4	6001-115
TP-250	250	47.625	60	60	22	9	15.9		ST-T	SCR-W5/16	WRN-M5T	SCR-ST-T4	6001-116
TP-300	300	47.625	60	60	22	10	28		ST-T	SCR-W5/16	WRN-M5T	SCR-ST-T4	6001-117

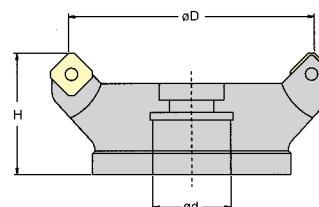
Round Insert Milling Cutter



ORDER NO.	D	d inch	d metrics	H	BLADE	R	HITACHI INSERT	SCREW FOR INSERT	SCREW FOR CLAMP	CLAMP	CODE NO.	
RM-5R50	50	-	22	45	4	5	RDMT10T3	SCR-CRS4	SCR-DM3.5	CL-5R	T15	6001-130
RM-5R63	63	25.4	22	50	5	5	RDMT10T3	SCR-CRS4		CL-5R	T15	6001-131
RM-8R50	50	-	22	45	3	8	RDMT1604	SCR-CRS5	SCR-W 1/4S	CL-8R	T20	6001-133
RM-8R63	63	25.4	22	50	3/4	8	RDMT1604	SCR-CRS5		CL-8R	T20	6001-134

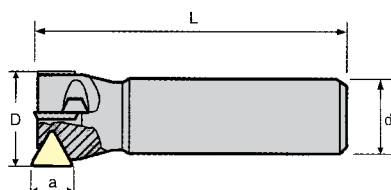
Powerful Face Milling Cutter

Walter inserts recommended
C4033



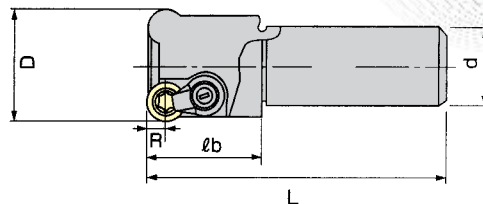
ORDER NO.	D	d	H	TEETH	INSERT	SCREW	WRENCH	CODE NO.
VC-4033-50	50	22	40	4	SNMX1205 SNGX1205	SCR-SN3.5	T15	6001-140
VC-4033-63	63	22	40	6				6001-141
VC-4033-80	80	27	50	6				6001-142
VC-4033-100	100	32	50	8				6001-143
VC-4033-125	125	40	63	10				6001-144
VC-4033-160	160	40	63	12				6001-145
VC-4033-200	200	60	63	18				6001-146

Shoulder End Mills



ORDER NO.	D	d	L	BLADE	INSERT	SCREW	WRENCH	WEIGHT (kg)	CODE NO.
SAE-20	20	20	110	2	TPMN110308	SCR-W3/16	WRN-M3L	0.4	6001-150
SAE-25	25	20	110	2	TPMN110308	SCR-W3/16	WRN-M3L	0.3	6001-151
SAE-30	30	20	130	2	TPMN160308	SCR-W1/4	WRN-M4L	0.5	6001-152
SAE-35	35	20	130	2	TPMN160308	SCR-W1/4	WRN-M4L	0.4	6001-153
SAE-40	40	20	130	3	TPMN160308	SCR-W1/4	WRN-M4L	0.5	6001-154
SAE-45	45	20	130	3	TPMN160308	SCR-W1/4	WRN-M4L	0.6	6001-155
SAE-50	50	20	130	3	TPMN160308	SCR-W1/4	WRN-M4L	0.7	6001-156
SAE-63	63	32	150	4	TPMN160308	SCR-W5/16	WRN-M4L	1.5	6001-157

Round Insert End Mills



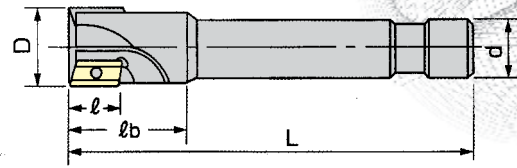
ORDER NO.	BLADE	D	L	d	lb	R	HITACHI INSERT	CLAMP	SCREW FOR CLAMP	SCREW FOR INSERT	CODE NO.	
C20-4R20-150	2	20	150	20	50	4	RDMT0802	-		SCR-CRS3	T8	6002-001
C25-5R25-150	2	25	150	25	60	5	RDMT10T3	CL-5R		SCR-CRS4	T15	6002-002
C25-5R25-200	2	25	200	25	120	5	RDMT10T3	CL-5R		SCR-CRS4	T15	6002-003
C25-5R30-150	2	30	150	25	50	5	RDMT10T3	CL-5R		SCR-CRS4	T15	6002-004
C25-5R30-200	2	30	200	25	50	5	RDMT10T3	CL-5R		SCR-CRS4	T15	6002-005
C32-5R32-150	3	32	150	32	70	5	RDMT10T3	CL-5R	SCR-DM3.5	SCR-CRS4	T15	6002-006
C32-5R32-200	3	32	200	32	120	5	RDMT10T3	CL-5R		SCR-CRS4	T15	6002-007
C32-5R32X150	3	35	150	32	50	5	RDMT10T3	CL-5R		SCR-CRS4	T15	6002-008
C32-5R35X200	3	35	200	32	50	5	RDMT10T3	CL-5R		SCR-CRS4	T15	6002-009
C32-5R40X150	3	40	150	32	50	5	RDMT10T3	CL-5R		SCR-CRS4	T15	6002-010
C32-5R40X200	3	40	300	32	50	5	RDMT10T3	CL-5R		SCR-CRS4	T15	6002-011

Drilling & Milling Cutter



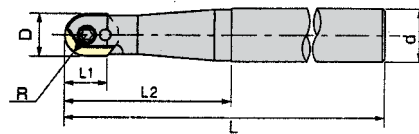
ORDER NO.	BLADE	D	L	d	l						CODE NO.
C16-DM16-120	2	16	120	16	30	CCMT060204	CPMT080204Z	SCR-CJU2.5	-	T8	6002-030
C16-DM16-175	2	16	175	16	40	CCMT060204	CPMT080204Z	SCR-CJU2.5	-	T8	6002-031
C20-DM20-130	2	20	130	20	30	CCMT060204	CPMT090204Z	SCR-CJU2.5	SCR-CJU3.5	T8.T15	6002-032
C20-DM20-185	2	20	185	20	50	CCMT060204	CPMT090204Z	SCR-CJU2.5	SCR-CJU3.5	T8.T15	6002-033
C25-DM25-130	2	25	130	25	40	CCMT090308	CPMT120308Z	SCR-CJU4	-	T15	6002-034
C25-DM25-220	2	25	220	25	70	CCMT090308	CPMT120308Z	SCR-CJU4	-	T15	6002-035
C32-DM32-170	2	32	170	32	50	CCMT120408	CPMT160408Z	SCR-CJU5	-	T20	6002-036
C32-DM32-250	2	32	250	32	80	CCMT120408	CPMT160408Z	SCR-CJU5	-	T20	6002-037

High Speed Shoulder Mills



ORDER NO.	BLADE	D	L	d	l	lb	HITACHI MITSUBISHI				CODE NO.
C16-SS16-120H	1	16	120	16	12	30	APET120204		SCR-CEX3.5	T15	6002-060
C20-SS20-120H	2	20	120	20	12	30	APET120204		SCR-CEX3.5	T15	6002-062
C20-SS20-200H	2	20	200	20	15	30	ADET160304		SCR-CEX4	T15	6002-063
C25-SS25-130H	2	25	130	25	15	35	ADET160304		SCR-CEX4	T15	6002-064
C25-SS25-200H	2	25	200	25	15	35	ADET160304		SCR-CEX4	T15	6002-065
C32-SS32-150H	3	32	150	32	15	45	ADET160304		SCR-CEX4	T15	6002-066
C32-SS32-200H	3	32	200	32	15	45	ADET160304		SCR-CEX4	T15	6002-067
C25-SS25-150M	2	25	150	25	14	35	APMT1604PDER		SCR-CAP4	T15	6002-069
C25-SS30-150M	2	30	150	25	14	45	APMT1604PDER		SCR-CAP4	T15	6002-070
C32-SS32-150M	3	32	150	32	14	45	APMT1604PDER		SCR-CAP4	T15	6002-080
C32-SS32-250M	3	32	250	32	-	60	APMT1604PDER		SCR-CAP4	T15	6002-081
C32-SS35-150M	3	35	150	32	14	45	APMT1604PDER		SCR-CAP4	T15	6002-082
C32-SS40-150M	4	40	150	32	14	45	APMT1604PDER		SCR-CAP4	T15	6002-083

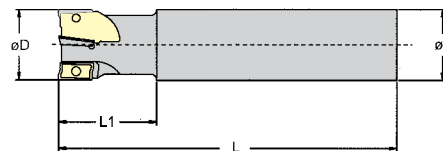
Ball End Mills



ORDER NO.	R	D	d	L	L ₁	L ₂	INSERT	SCREW	SCREW	WRENCH	WEIGHT (kg)	CODE NO.
C20-AR8-160	8	16	20	160	13	65	ZPFW160	SCR-AR8	SCR-CBP3.5	T15	0.5	6002-130
C25-AR10-180	10	20	25	180	17	80	ZPFW200	SCR-AR10	SCR-CBP5	T20		6002-131
C32-AR12.5-200	12.5	25	32	200	22	90	ZPFW250	SCR-AR12.5	SCR-CBP5	T20		6002-132
C32-AR15-220	15	30	32	220	27	100	ZPFW300	SCR-AR15	SCR-CBP6	T25	1.3	6002-133

High-Speed Rough Endmill

Mitsubishi inserts recommended



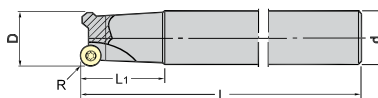
ORDER NO.	D	d	L	L ₁	TEETH	INSERT	SCREW	WRENCH	CODE NO.
VAPX-1616	16	16	120	24	2	AOMT 123608	SCR- APX2.5	T8	6002-030
VAPX-1716	17	16	150	24	2				6002-031
VAPX-2020	20	20	150	29	3				6002-032
VAPX-2120	21	20	150	29	3				6002-033
VAPX-2525	25	25	150	34	4				6002-034
VAPX-2625	26	25	200	34	4				6002-035

CAP400R High Speed Shoulder Mills



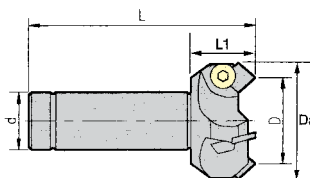
ORDER NO.	D	d	lb	l	L	BLADE				WEIGHT (kg)	CODE NO.
CAP400R-2525X150	25	25	35	14	150	2	APMT1604PDER	SCR-CAP4	T15	0.7	6003-040
CAP400R-2525X200	25	25	35	14	200	2	APMT1604PDER	SCR-CAP4	T15	0.9	6003-041
CAP400R-3025X150	30	25	45	14	150	2	APMT1604PDER	SCR-CAP4	T15	0.6	6003-042
CAP400R-3025X200	30	25	45	14	200	2	APMT1604PDER	SCR-CAP4	T15	0.9	6003-043
CAP400R-3232X150	32	32	45	14	150	3	APMT1604PDER	SCR-CAP4	T15	0.9	6003-044
CAP400R-3232X200	32	32	60	14	200	3	APMT1604PDER	SCR-CAP4	T15	1.3	6003-045
CAP400R-3532X150	35	32	45	14	150	3	APMT1604PDER	SCR-CAP4	T15	0.9	6003-046
CAP400R-3532X200	35	32	45	14	200	3	APMT1604PDER	SCR-CAP4	T15	1.3	6003-047
CAP400R-4032X150	40	32	45	14	150	3	APMT1604PDER	SCR-CAP4	T15	1.1	6003-048
CAP400R-5032X150	50	32	45	14	150	4	APMT1604PDER	SCR-CAP4	T15	1.5	6003-049

CRT Round Insert End Mills



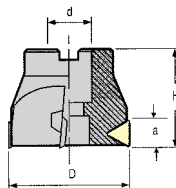
ORDER NO.	D	d	R	L	BLADE	INSERT			WEIGHT (kg)	CODE NO.
CRT-6R32X150	32	32	6	150	3	RPMT1204MO	SCR-W3/16S	SCR-CRT4	0.9	6003-051
CRT-6R32X200	32	32	6	200	3	RPMT1204MO	SCR-W3/16S	SCR-CRT4	1.3	6003-052
CRT-6R35X150	35	32	6	150	3	RPMT1204MO	SCR-W3/16S	SCR-CRT4	1.1	6003-053
CRT-6R32X200	35	32	6	200	3	RPMT1204MO	SCR-W3/16S	SCR-CRT4	1.3	6003-054

Face End Mills



ORDER NO.	D	Da	d	L	L ₁	BLADE	INSERT			WEIGHT (kg)	CODE NO.
C-32-SE445-50	50	62	32	150	45	3	SEKN1203	SCR-W1/4L	WRN-M4T	1.25	6003-060
C-32-SE445-63	63	74	32	150	45	4	SEKN1203	SCR-W1/4L	WRN-M4T	1.3	6003-061

Shoulder Face Milling Cutter



ORDER NO.	D	d METRIC	H	a	BLADE	INSERT			CODE NO.
TPS-50	50	22	50	16	3	TPMN1603	SCR-W1/4	WRN-M4L	6003-065
TPS-63	63	22	50	16	4	TPMN1603	SCR-W1/4	WRN-M4L	6003-066

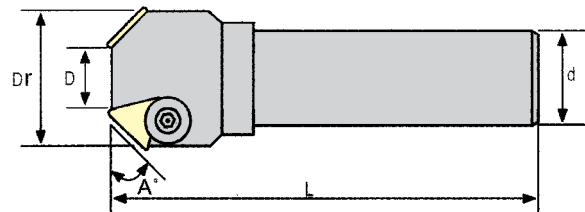
45° Chamfering End Mills



ORDER NO.	Cutter Dia.	Shank Dia.	Length	Capacity	Screw	Wrench	INSERT	WEIGHT (kg)	CODE NO.
TC12	25ø	12ø	110	3ø~25ø	M4	T15	TCMT16T304	0.2	6004-002

45° Chamfering Endmill

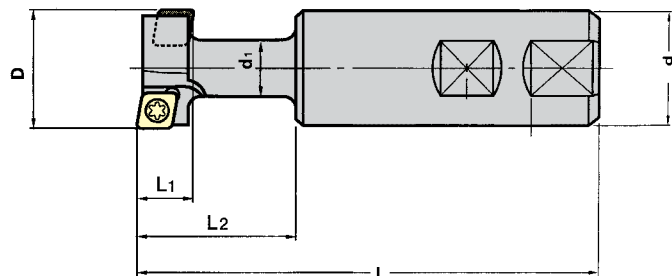
ISO CODE



ORDER NO.	A°	D	Dr	d	L	TEETH	INSERT	SCREW	WRENCH	CODE NO.
VCE-4521	45	5	21	16	120	1	TPUN1603	SCR-W1/4	WRN-M4L	6004-005
VCE-4531	45	10	31	20	120	2				6004-006
VCE-4550	45	20	50	25	130	3	TPUN2204	SCR-W5/16	WRN-M5L	6004-007
VCE-4532	45	6	32	32	150	1				6004-008
VCE-4563	45	35	63	25	150	3				6004-009

T-Slot Endmill

ISO CODE

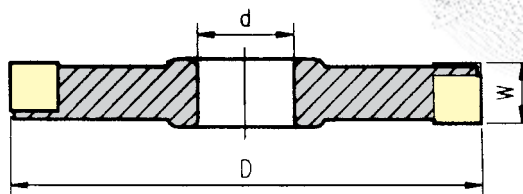


ORDER NO.	D	L1	d	d1	L2	L	TEETH	INSERT	SCREW	WRENCH	CODE NO.
VTE-2411	24	11	20	12	29	90	4	CCMT-060204	SCR-TS2.5	T8	6004-015
VTE-3114	31	14	25	15	42	110	4	CPMT-080204Z			6004-016
VTE-3918	39	18	32	19	49	120	4	CPMT-090308	SCR-TS4	T15	6004-017
VTE-4922	49	22	32	25	60	140	4	CPMT-120408	SCR-TS5	T20	6004-018

Side Milling Cutter

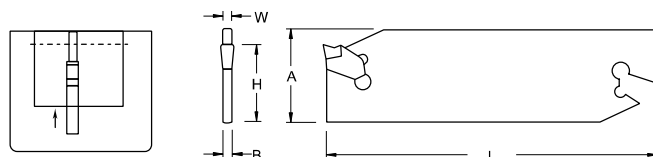


ISO CODE



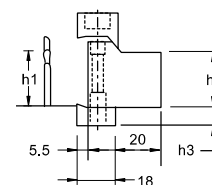
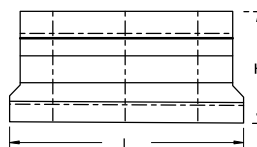
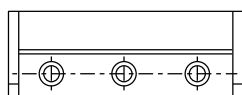
ORDER NO.	D	d	W	TEETH	INSERT	CLAMP	SCREW	WRENCH	CODE NO.
VSM-1016	100	1"	16	10	SPUN 120304	CL-S CL-SL	SCR- CL5/16	WRN-M4T	6004-020
VSM-1216	125	1"	16	14					6004-021
VSM-1516	150	1"	16	16					6004-022
VSM-2016	200	1"	16	20					6004-023

Cutting Holder



ORDER NO.	MAX. DIA	W	B	H	L	A	INSERT	Wrench	WEIGHT(kg)	CODE NO.
CGIH26-3	75	3	2.4	21	100	25.4	NGTN3	SL-1	0.1	6004-030
CGIH32-3	100	3	2.4	25	150	31.3			0.2	6004-031

Cutting Blocks

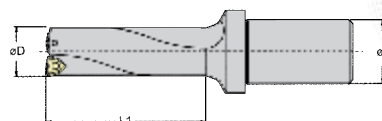


ORDER NO.	h1	h2	h3	H	L	Clamp	Screw	Wrench	Cutting Holders	WEIGHT(kg)	CODE NO.
SBU20-26	20	20	10	45	80	BCS15	BX0622	LH050	CGIH26-3	0.8	6004-060
SBU20-32	20	20	13.5	50	100	BCS20			CGIH32-3	1.1	6004-061
SBU25-32	25	25	8.5	50	110	BCS25			CGIH32-3	1.2	6004-062

Power Super Drill 2L



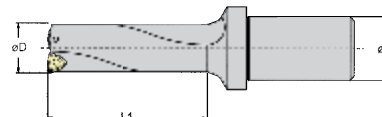
ISO CODE



ORDER NO.	D	d	L1	INSERT	SCREW	WRENCH	CODE NO.
VSD-15X2	15	25	30	WCMX030208	SCR-EXD2.5	T8	6004-100
VSD-16X2	16	25	32				6004-101
VSD-17X2	17	25	34				6004-102
VSD-18X2	18	25	36				6004-103
VSD-19X2	19	25	38				6004-104
VSD-20X2	20	25	40	WCMX040208	SCR-EXD2.5	T8	6004-105
VSD-21X2	21	32	42				6004-106
VSD-22X2	22	32	44				6004-107
VSD-23X2	23	32	46				6004-108
VSD-24X2	24	32	48	WCMX050308	SCR-EXD3	T10	6004-109
VSD-25X2	25	32	50				6004-110
VSD-26X2	26	32	52				6004-111
VSD-27X2	27	32	54				6004-112
VSD-28X2	28	32	56				6004-113
VSD-29X2	29	32	58				6004-114
VSD-30X2	30	32	60				6004-115
VSD-31X2	31	32	62	WCMX06T308	SCR-EXD3.5	T15	6004-116
VSD-32X2	32	32	64				6004-117
VSD-33X2	33	32	66				6004-118
VSD-34X2	34	32	68				6004-119
VSD-35X2	35	32	70				6004-120

Power Super Drill 3L

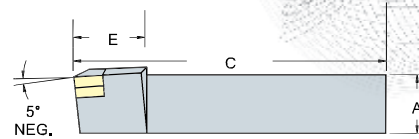
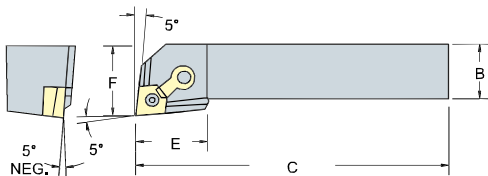
ISO CODE



ORDER NO.	D	d	L1	INSERT	SCREW	WRENCH	CODE NO.
VSD-14X3	14	25	42	WCMX030208	SCR-EXD2.5	T8	6004-131
VSD-15X3	15	25	45				6004-132
VSD-16X3	16	25	48				6004-133
VSD-17X3	17	25	51				6004-134
VSD-18X3	18	25	54				6004-135
VSD-19X3	19	25	57				6004-136
VSD-20X3	20	25	60	WCMX040208	SCR-EXD2.5	T8	6004-137
VSD-21X3	21	32	63				6004-138
VSD-22X3	22	32	66				6004-139
VSD-23X3	23	32	69				6004-140
VSD-24X3	24	32	72	WCMX050308	SCR-EXD3	T10	6004-141
VSD-25X3	25	32	75				6004-142
VSD-26X3	26	32	78				6004-143
VSD-27X3	27	32	81				6004-144
VSD-28X3	28	32	84				6004-145
VSD-29X3	29	32	87				6004-146
VSD-30X3	30	32	90				6004-147
VSD-31X3	31	32	93	WCMX06T308	SCR-EXD3.5	T15	6004-148
VSD-32X3	32	32	96				6004-149
VSD-33X3	33	32	99				6004-150
VSD-34X3	34	32	102				6004-151
VSD-35X3	35	32	105				6004-152
VSD-36X3	36	32	108				6004-153
VSD-37X3	37	32	111		6004-154		

MCLN

95°

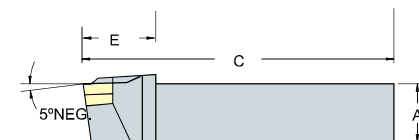
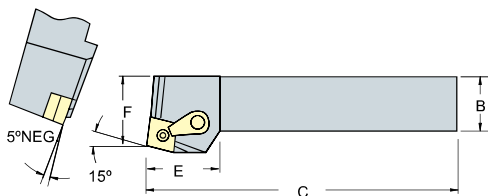


RIGHT HAND SHOWN LEFT HAND OPPOSITE

ORDER NO.		INSERT	DIMENSIONS						PARTS				WEIGHT (kg)		CODE NO.	
Righthand	Lefthand		A	B	C	E	F					Right	Left	Right	Left	
MCLNR-1616H12	MCLNL-1616H12	CNMG 12 04 08	16	16	100	32	20	SNC-432	LCS-617	CP50-22	CS70-22	0.25	0.25	6005-001	6005-101	
MCLNR-2020K12	MCLNL-2020K12	CNMG 12 04 08	20	20	125	32	25	SNC-432	LCS-617	CP50-22	CS70-22	0.45	0.45	6005-002	6005-102	
MCLNR-2525M12	MCLNL-2525M12	CNMG 12 04 08	25	25	150	32	32	SNC-432	LCS-617	CP50-22	CS70-22	0.80	0.80	6005-003	6005-103	
MCLNR-3225P12	MCLNL-3225P12	CNMG 12 04 08	32	25	170	32	32	SNC-432	LCS-617	CP50-22	CS70-22	1.20	1.20	6005-004	6005-104	

MCRN

75°

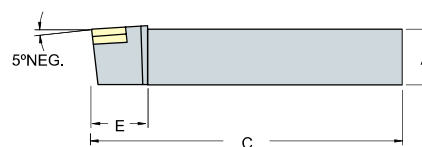
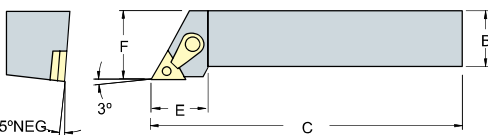


RIGHT HAND SHOWN LEFT HAND OPPOSITE

ORDER NO.		INSERT	DIMENSIONS						PARTS				WEIGHT (kg)		CODE NO.	
Righthand	Lefthand		A	B	C	E	F					Right	Left	Right	Left	
MCRNR-2020K12	MCRNL-2020K12	CNMG 12 04 08	20	20	125	32	25	SMC-432	LCS-617	CP50-22	CS70-22	0.45	0.45	6005-030	6005-130	
MCRNR-2525M12	MCRNL-2525M12	CNMG 12 04 08	25	25	150	32	32	SMC-432	LCS-617	CP50-22	CS70-22	0.80	0.80	6005-031	6005-131	
MCRNR-3225P12	-	CNMG 12 04 08	32	25	170	32	32	SMC-432	LCS-617	CP50-22	CS70-22	1.20	-	6005-032	-	

MTJN

93°

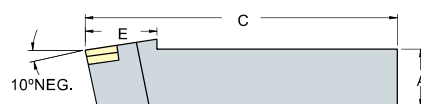
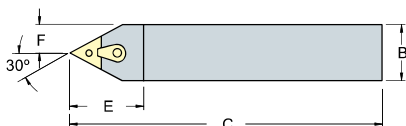


RIGHT HAND SHOWN LEFT HAND OPPOSITE

ORDER NO.		INSERT	DIMENSIONS						PARTS				WEIGHT (kg)		CODE NO.	
Righthand	Lefthand		A	B	C	E	F					Right	Left	Right	Left	
MTJNR-2020K16	MTJNL-2020K16	TNMG 16 04 08	20	20	125	32	25	SMT-322	LCS-513	CP50-22	CS70-22	0.45	0.45	6005-060	6005-160	
MTJNR-2525M16	MTJNL-2525M16	TNMG 16 04 08	25	25	150	32	32	SMT-322	LCS-513	CP50-22	CS70-22	0.80	0.80	6005-061	6005-161	

MTEN

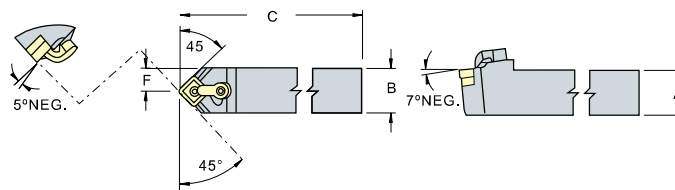
60°



NEUTRAL HAND

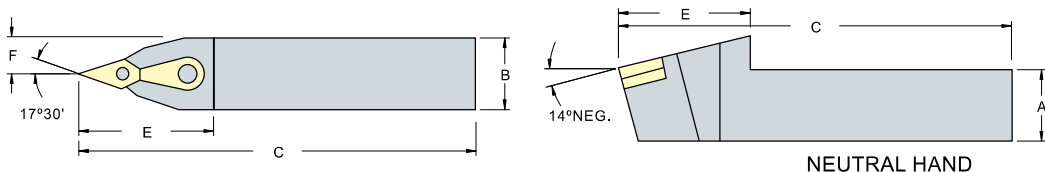
ORDER NO.	INSERT	DIMENSIONS						PARTS				WEIGHT (kg)	CODE NO.
Righthand		A	B	C	E	F						Right	
MTENN-2020K16	TNMG 16 04 08	20	20	125	32	10.46	SMT-322	LCS-513	CP50-22	CS70-22	0.45	6005-090	
MTENN-2525M16	TNMG 16 04 08	25	25	150	32	12.95	SMT-322	LCS-513	CP50-22	CS70-22	0.80	6005-091	

MSD
45°



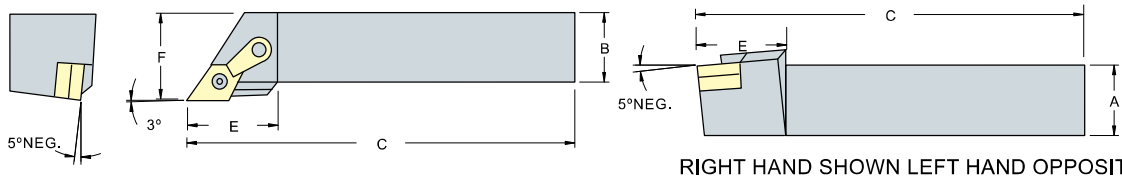
ORDER NO.	INSERT	DIMENSIONS				PARTS				WEIGHT (kg)	CODE NO.
Righthand		A	B	C	F						Right
MSDNN-2020K12	SN□□1204□□	20	20	125	10.3	SMS-432	LCS-617	CP50-22	CS70-22	0.45	6005-120
MSDNN-2525M12	SN□□1204□□	25	25	150	12.8	SMS-432	LCS-617	CP50-22	CS70-22	0.80	6005-121
MSDNN-3225P12	SN□□1204□□	32	25	170	12.8	SMS-432	LCS-617	CP50-22	CS70-22	1.20	6005-122

MVVN
72°32'



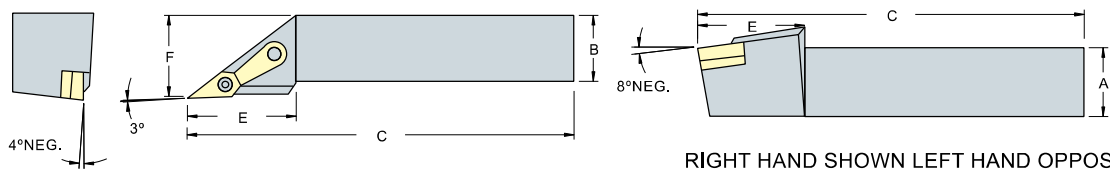
ORDER NO.	INSERT	DIMENSIONS						PARTS				WEIGHT (kg)	CODE NO.
Righthand		A	B	C	E	F						Right	
MVVNN-2020K 16K	VNMG 16 04 08	20	20	125	42	10.57	SMV-322	LCS-513	CP50-25	CS70-22	0.45	6005-150	
MVVNN-2525M 16K	VNMG 16 04 08	25	25	150	42	13.06	SMV-322	LCS-513	CP50-25	CS70-22	0.80	6005-151	
MVVNN-3225P 16K	VNMG 16 04 08	32	25	170	42	13.06	SMV-322	LCS-513	CP50-25	CS70-22	1.20	6005-152	

MDJN
93°



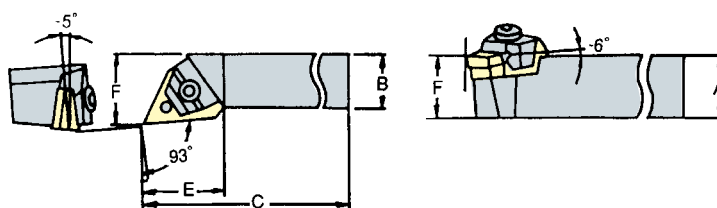
ORDER NO.	INSERT	DIMENSIONS						PARTS				WEIGHT (kg)		CODE NO.	
Righthand	Lefthand		A	B	C	E	F					Right	Left	Right	Left
MDJNR-2020K15	MDJNL-2020K15	DNMG 15 04 08	20	20	125	36	25	SMD-463	LCS-619	CP50-24	CS70-22	0.45	0.45	6005-180	6005-280
MDJNR-2525M15	MDJNL-2525M15	DNMG 15 04 08	25	25	150	36	32	SMD-463	LCS-619	CP50-24	CS70-22	0.80	0.80	6005-181	6005-281
MDJNR-3225P15	MDJNL-3225P15	DNMG 15 04 08	32	25	170	36	32	SMD-463	LCS-619	CP50-24	CS70-22	1.20	1.20	6005-182	6005-282

MVJN
93°



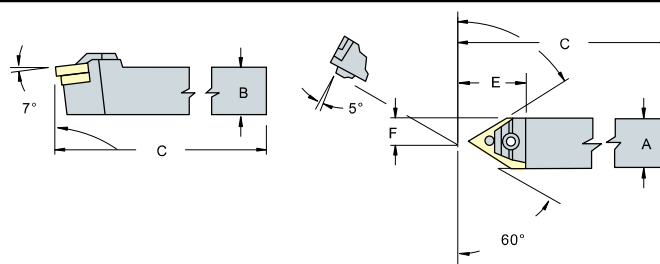
ORDER NO.	INSERT	DIMENSIONS						PARTS				WEIGHT (kg)		CODE NO.	
Righthand	Lefthand		A	B	C	E	F					Right	Left	Right	Left
MVJNR-2020K16	MVJNL-2020K16	VNMG 16 04 08	20	20	125	37	25	SMV-322	LCS-513	CP50-25	CS70-22	0.45	0.45	6005-210	6005-310
MVJNR-2525M16	MVJNL-2525M16	VNMG 16 04 08	25	25	150	37	32	SMV-322	LCS-513	CP50-25	CS70-22	0.80	0.80	6005-211	6005-311
MVJNR-3225P16	MVJNL-3225P16	VNMG 16 04 08	32	25	170	37	32	SMV-322	LCS-513	CP50-25	CS70-22	1.20	1.20	6005-212	6005-312

WTJN 93°



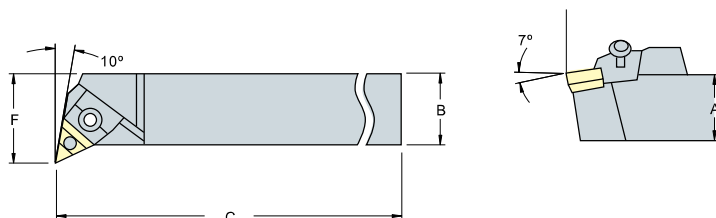
ORDER NO.		INSERT	DIMENSIONS				PARTS					WEIGHT(kg)		CODE NO.			
Righthand	Lefthand		A	B	C	E	F						Right	Left	Right	Left	
WTJNR-2020K16	WTJNL-2020K16	TNMG 16 04 08	20	20	125	32	25	SMT-322	LCS-420N	LCS-4B	MMW-30	CS70-24	LW030	0.45	0.45	6005-240	6005-340
WTJNR-2525M16	WTJNL-2525M16	TNMG 16 04 08	25	25	150	32	32	SMT-322	LCS-420N	LCS-4B	MMW-30	CS70-24	LW030	0.80	0.80	6005-241	6005-341

WTEN 60°



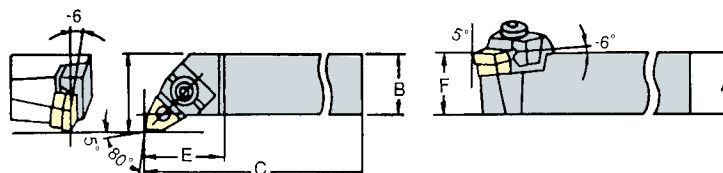
ORDER NO.	INSERT	DIMENSIONS				PARTS					WEIGHT (kg)		CODE NO.	
Righthand		A	B	C	E	F								Right
WTENN-2020K16	TNMG 16 04 08	20	20	125	32	10	SMT-322	LCS-420N	LCS-4B	MMW-30	CS70-24	LW030	0.45	6005-270
WTENN-2525M16	TNMG 16 04 08	25	25	150	38	12.5	SMT-322	LCS-420N	LCS-4B	MMW-30	CS70-24	LW030	0.80	6005-271

WTXN



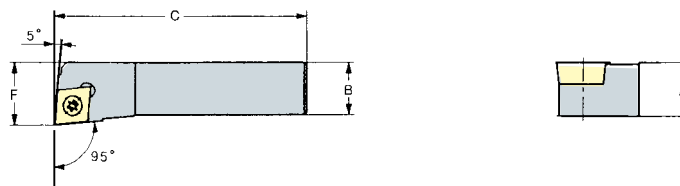
ORDER NO.		INSERT	DIMENSIONS				PARTS					WEIGHT(kg)		CODE NO.			
Righthand	Lefthand		A	B	C	E	F						Right	Left	Right	Left	
WTXNR-2020K16	WTXNL-2020K16	TNMG 16 04 08	20	20	125	32	25	SMT-322	LCS-420N	LCS-4B	MMW-30	CS70-24	LW030	0.45	0.45	6005-300	6005-400
WTXNR-2525M16	WTXNL-2525M16	TNMG 16 04 08	25	25	150	32	32	SMT-322	LCS-420N	LCS-4B	MMW-30	CS70-24	LW030	0.80	0.80	6005-301	6005-401

WWLN 95°



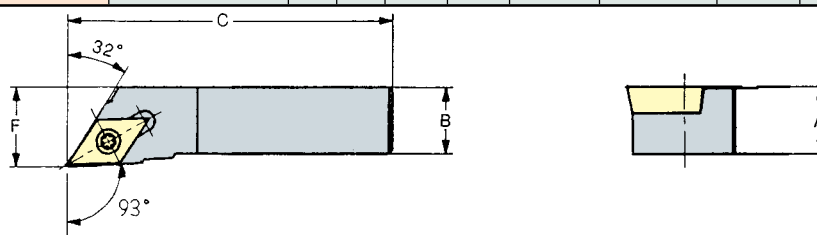
ORDER NO.		INSERT	DIMENSIONS				PARTS					WEIGHT(kg)		CODE NO.			
Righthand	Lefthand		A	B	C	E	F						Right	Left	Right	Left	
WWLNR-2020K08	WWLNL-2020K08	WNMG 08 04 08	20	20	125	32	25	SMW-433	LCS-520	LCS-5B	MMW-40	CS70-25	LW040 & LW030	0.45	0.45	6005-330	6005-430
WWLNR-2525M08	WWLNL-2525M08	WNMG 08 04 08	25	25	150	32	32	SMW-433	LCS-520	LCS-5B	MMW-40	CS70-25	LW040 & LW030	0.80	0.80	6005-331	6005-431
WWLNR-3225P08	WWLNL-3225P08	WNMG 08 04 08	32	25	170	32	32	SMW-433	LCS-520	LCS-5B	MMW-40	CS70-25	LW040 & LW030	1.20	1.20	6005-332	6005-432

SCLC



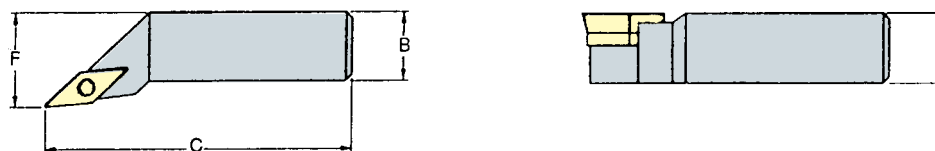
ORDER NO.		INSERT	DIMENSIONS				PARTS		WEIGHT (kg)		CODE NO.	
Righthand	Lefthand		A	B	C	F			Right	Left	Right	Left
SCLCR-0808H06	SCLCL-0808H06	CC□□0602□□	8	8	100	10	CS2560	FT-7	0.06	0.06	6005-360	6005-460
SCLCR-1010H06	SCLCL-1010H06	CC□□0602□□	10	10	100	12	CS2560	FT-7	0.08	0.08	6005-361	6005-461
SCLCR-1212H09	SCLCL-1212H09	CC□□09T3□□	12	12	100	16	CS3590	FT-15	0.12	0.12	6005-362	6005-462
SCLCR-1616H09	SCLCL-1616H09	CC□□09T3□□	16	16	100	20	CS3590	FT-15	0.21	0.21	6005-363	6005-463

SDJC



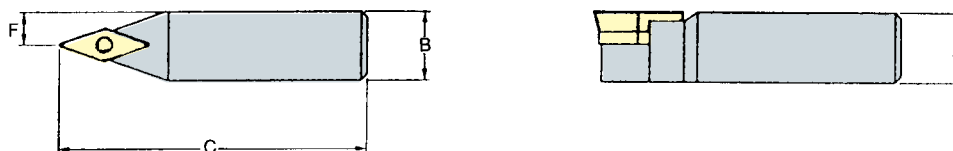
ORDER NO.		INSERT	DIMENSIONS				PARTS		WEIGHT (kg)		CODE NO.	
Righthand	Lefthand		A	B	C	F			Right	Left	Right	Left
SDJCR-0808H07	SDJCL-0808H07	DC□□0702□□	8	8	100	10	CS2560	FT-7	0.06	0.06	6005-390	6005-490
SDJCR-1010H07	SDJCL-1010H07	DC□□0702□□	10	10	100	12	CS2560	FT-7	0.08	0.08	6005-391	6005-491
SDJCR-1212H11	SDJCL-1212H11	DC□□11T3□□	12	12	100	16	CS4090	FT-15	0.12	0.12	6005-392	6005-492
SDJCR-1616H11	SDJCL-1616H11	DC□□11T3□□	16	16	100	20	CS4090	FT-15	0.21	0.21	6005-393	6005-493

SVJC



ORDER NO.		INSERT	DIMENSIONS				PARTS			WEIGHT (kg)		CODE NO.		
Righthand	Lefthand		A	B	C	F				Right	Left	Right	Left	
SVJCR-1010H11	SVJCL-1010H11	VC□□1103□□	10	10	100	10.5	-	-	CS2560	FT-7	0.08	0.08	6005-420	6005-520
SVJCR-1212H11	SVJCL-1212H11	VC□□1103□□	12	12	100	12.5	-	-	CS2560	FT-7	0.12	0.12	6005-421	6005-521
SVJCR-1616H11	SVJCL-1616H11	VC□□1103□□	16	16	100	16.5	-	-	CS2560	FT-7	0.21	0.21	6005-422	6005-522
SVJCR-2020K16	SVJCL-2020K16	VC□□1604□□	20	20	125	25	SMV-321	SN535	CS35115	FT-15	0.40	0.40	6005-423	6005-523
SVJCR-2525M16	SVJCL-2525M16	VC□□1604□□	25	25	150	32	SMV-321	SN535	CS35115	FT-15	0.72	0.72	6005-424	6005-524

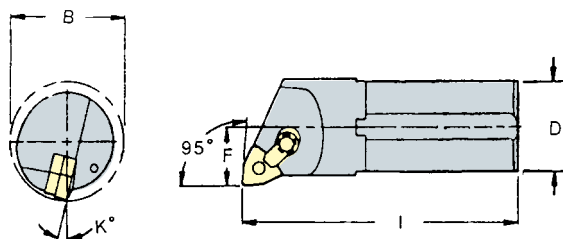
SVVC



ORDER NO.		INSERT	DIMENSIONS				PARTS			WEIGHT (kg)		CODE NO.	
			A	B	C	F				Right	Left		
SVVCN-1010H11		VC□□1103□□	10	10	100	5	-	-	CS2560	FT-7	0.08	0.08	6005-450
SVVCN-1212H11		VC□□1103□□	12	12	100	6	-	-	CS2560	FT-7	0.12	0.12	6005-451
SVVCN-1616H11		VC□□1103□□	16	16	100	8	-	-	CS2560	FT-7	0.21	0.21	6005-452
SVVCN-2020K16		VC□□1604□□	20	20	125	10	SMV-321	SN535	CS35115	FT-15	0.40	0.40	6005-453
SVVCN-2525M16		VC□□1604□□	25	25	150	12.5	SMV-321	SN535	CS35115	FT-15	0.72	0.72	6005-454

MWLN

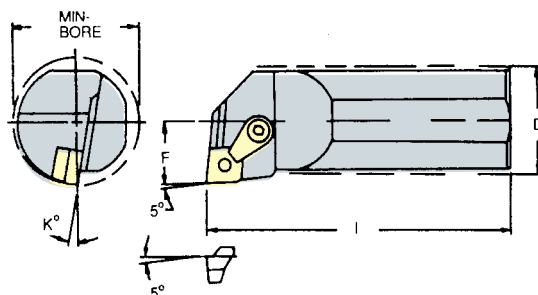
95°



ORDER NO.		INSERT	DIMENSIONS					PARTS			WEIGHT (kg)		CODE NO.		
Righthand	Lefthand		D	F	I	B	K°					Right	Left	Right	Left
S20R-MWLN08	S20R-MWLN08	WNGM 08 04	20	13	200	25	17°	-	LCS-511	CP50-26	CS70-21	0.50	0.50	6005-480	6005-580
S25R-MWLN08	S25R-MWLN08	WNGM 08 04	25	17	200	32	14°	-	LCS-511	CP50-26	CS70-21	0.95	0.95	6005-481	6005-581
S32S-MWLN08	S32S-MWLN08	WNGM 08 04	32	22	250	40	14°	SMW-432	LCS-617	CP50-22	CS70-22	1.60	1.60	6005-482	6005-582
S40T-MWLN08	S40T-MWLN08	WNGM 08 04	40	27	300	50	12°	SMW-432	LCS-617	CP50-22	CS70-22	2.90	2.90	6005-483	6005-583
S50U-MWLN08	S50U-MWLN08	WNGM 08 04	50	35	350	63	12°	SMW-432	LCS-617	CP50-22	CS70-22	5.90	5.90	6005-484	6005-584

MCLN

95°

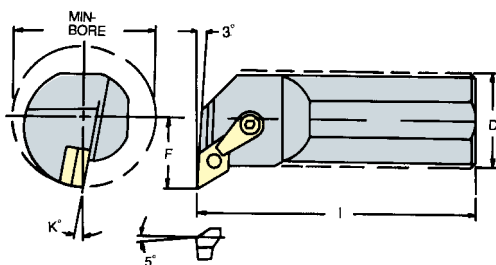


RIGHT HAND SHOWN LEFT HAND OPPOSITE

ORDER NO.		INSERT	DIMENSIONS					PARTS			WEIGHT (kg)		CODE NO.		
Righthand	Lefthand		D	F	I	B	K°					Right	Left	Right	Left
S20R-MCLNR12	S20R-MCLNL12	CNMG 12 04 08	20	13	200	25	17°	-	LCS-511	CP50-26	CS70-21	0.50	0.50	6005-510	6005-610
S25R-MCLNR12	S25R-MCLNL12	CNMG 12 04 08	25	17	200	32	14°	-	LCS-511	CP50-26	CS70-21	0.95	0.95	6005-511	6005-611
S32S-MCLNR12	S32S-MCLNL12	CNMG 12 04 08	32	22	250	40	14°	SMC-432	LCS-617	CP50-22	CS70-22	1.60	1.60	6005-512	6005-612
S40T-MCLNR12	S40T-MCLNL12	CNMG 12 04 08	40	27	300	50	12°	SMC-432	LCS-617	CP50-22	CS70-22	2.90	2.90	6005-513	6005-613
S50U-MCLNR12	S50U-MCLNL12	CNMG 12 04 08	50	35	350	63	12°	SMC-432	LCS-617	CP50-22	CS70-22	5.90	5.90	6005-514	6005-614

MDUN

93°

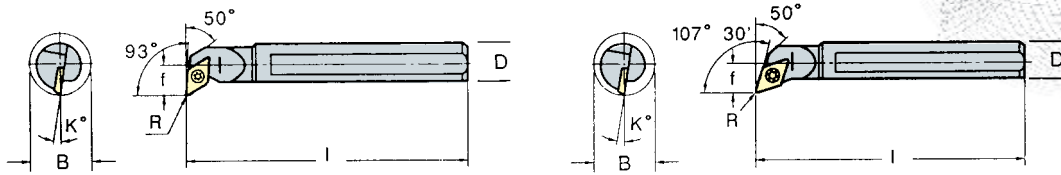


RIGHT HAND SHOWN LEFT HAND OPPOSITE

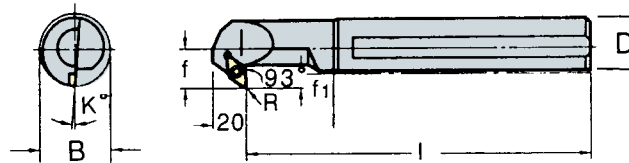
ORDER NO.		INSERT	DIMENSIONS					PARTS			WEIGHT (kg)		CODE NO.		
Righthand	Lefthand		D	F	I	B	K°					Right	Left	Right	Left
S25R-MDUNR15	S25R-MDUNL15	DNMG 15 04 08	25	17	200	32	12°	SMD-443	LCS-617	CP50-24	CS70-22	0.95	0.95	6005-540	6005-640
S32S-MDUNR15	S32S-MDUNL15	DNMG 15 04 08	32	22	250	40	10°	SMD-443	LCS-617	CP50-24	CS70-22	1.60	1.60	6005-541	6005-641
S40T-MDUNR15	S40T-MDUNL15	DNMG 15 04 08	40	27	300	50	10°	SMD-443	LCS-617	CP50-24	CS70-22	2.90	2.90	6005-542	6005-642
S50U-MDUNR15	S50U-MDUNL15	DNMG 15 04 08	50	35	350	63	10°	SMD-443	LCS-617	CP50-24	CS70-22	5.90	5.90	6005-543	6005-643

Boring Bars

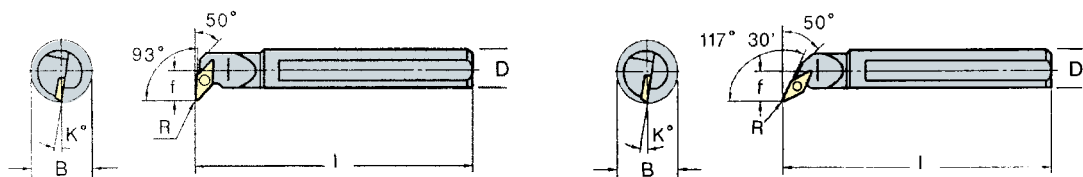
SMALL SIZE



ORDER NO.		DIMENSIONS					INSERT	PARTS		WEIGHT (kg)		CODE NO.	
Righthand	Lefthand	D	F	I	B	K°				Right	Left	Right	Left
S10M-SDUCR07	S10M-SDUCL07	10	7	150	13	10°	DCMT 0702□□	CS2560	FT-7	0.15	0.15	6005-570	6005-670
S12M-SDUCR07	S12M-SDUCL07	12	9	150	16	8°				0.18	0.18	6005-571	6005-671
S16Q-SDUCR07	S16Q-SDUCL07	16	11	180	20	6°				0.28	0.28	6005-572	6005-672
S20R-SDUCR11	S20R-SDUCL11	20	13	200	25	8°	DCMT 11T3□□	CS35095	FT-15	0.45	0.45	6005-573	6005-673
S25R-SDUCR11	S25R-SDUCL11	25	17	200	32	4°				0.60	0.60	6005-574	6005-674
S10M-SDQCR07	S10M-SDQCL07	10	7	150	13	10°	DCMT 0702□□	CS2560	FT-7	0.15	0.15	6005-600	6005-700
S12M-SDQCR07	S12M-SDQCL07	12	9	150	16	8°				0.18	0.18	6005-601	6005-701
S16Q-SDQCR07	S16Q-SDQCL07	16	11	180	20	6°				0.28	0.28	6005-602	6005-702
S20R-SDQCR11	S20R-SDQCL11	20	13	200	25	8°	DCMT 11T3□□	CS35095	FT-15	0.45	0.45	6005-603	6005-703
S25R-SDQCR11	S25R-SDQCL11	25	17	200	32	4°				0.60	0.60	6005-604	6005-704



ORDER NO.		DIMENSIONS					INSERT	PARTS		WEIGHT (kg)		CODE NO.	
Righthand	Lefthand	D	F	I	B	K°				Right	Left	Right	Left
S12M-SDZCR07	S12M-SDZCL07	12	10.5	150	14	9°	DCMT 0702□□	CS2560	FT-7	0.18	0.18	6005-630	6005-730
S16Q-SDZCR07	S16Q-SDZCL07	16	12.5	180	16	8°				0.28	0.28	6005-631	6005-731
S20R-SDZCR11	S20R-SDZCL11	20	15.5	200	20	8°	DCMT 11T3□□	CS35095	FT-15	0.45	0.45	6005-632	6005-732
S25R-SDZCR11	S25R-SDZCL11	25	18	200	25	6°				0.60	0.60	6005-633	6005-733



ORDER NO.		DIMENSIONS					INSERT	PARTS		WEIGHT (kg)		CODE NO.	
Righthand	Lefthand	D	F	I	B	K°				Right	Left	Right	Left
S16Q-SVUCR11	S16Q-SVUCL11	16	13	180	22	7°	VCMT 1103□□	CS2560	FT-7	0.28	0.28	6005-660	6005-760
S20R-SVUCR11	S20R-SVUCL11	20	15	200	27	6°				0.45	0.45	6005-661	6005-761
S25R-SVUCR16	S25R-SVUCL16	25	18	200	33	4°	VCMT 1604	CS3590	FT-15	0.60	0.60	6005-662	6005-762
S16Q-SVQCR11	S16Q-SVQCL11	16	13	180	22	7°	VCMT 1103□□	CS2560	FT-7	0.28	0.28	6005-690	6005-790
S20R-SVQCR11	S20R-SVQCL11	20	15	200	27	6°				0.45	0.45	6005-691	6005-791
S25R-SVQCR16	S25R-SVQCL16	25	18	200	33	4°	VCMT 1604	CS3590	FT-15	0.60	0.60	6005-692	6005-792



A	B	C
D	E	F
G	H	I
2 Relief angle		

tolerances					
IC: theoretical diameter of the insert inscribed circle T: thickness B: see figure below					
tolerance class	tolerance on "IC"		tolerance on "B"		tolerance on "T"
	in	mm	in	mm	in mm
C	±0.010	±0.025	±0.0005	±0.013	±0.001 ±0.025
H	±0.005	±0.013	±0.0005	±0.013	±0.001 ±0.025
E	±0.010	±0.025	±0.0010	±0.025	±0.001 ±0.025
G	±0.010	±0.025	±0.0010	±0.025	±0.005 ±0.13
M	see tables at right		see tables at right		±0.005 ±0.13
U	see tables at right		see tables at right		±0.005 ±0.13
3 tolerance					

H	O	P	R	S
T	C	D	E	M
V	L	A	B	K
1 Shape				

N		T	
R		Q	
F		U	
A		B	
M		H	
G		C	
W		J	
4 Insert type			

inch	C	N	M	G	-	4	3	2			
(metric)	C	N	M	G		12	04	08			
position	1	2	3	4		5	6	7	8	9	10

5 Size											
inch	IC		metric cutting edge length								
	in	mm	C	D	R	S	T	V	W		
1.2 (5)	5/22	3.97	-	04	03	03	06	-	-		
1.5 (6)	3/16	4.76	04	05	04	04	08	08	-		
1.8 (7)	7/22	5.56	05	06	05	05	09	09	03		
-	0.236	6.00	-	06	-	-	-	-	-		
2	1/4	6.35	06	07	06	06	11	11	04		
2.5	5/16	7.94	08	09	07	07	13	13	05		
-	0.315	8.00	-	08	-	-	-	-	-		
3	3/8	9.52	09	11	09	09	16	16	06		
-	0.394	10.00	-	10	-	-	-	-	-		
3.5	1/16	11.11	11	13	11	11	19	19	07		
-	0.472	12.00	-	12	-	-	-	-	-		
4	1/2	12.70	12	15	12	12	22	22	08		
4.5	9/16	14.29	14	17	14	14	24	24	09		
5	5/8	15.88	16	19	15	15	27	27	10		
-	0.630	16.00	-	16	-	-	-	-	-		
5.5	11/16	17.46	17	21	17	17	30	30	11		
6	3/4	19.05	19	23	19	19	33	33	13		
-	0.787	20.00	-	20	-	-	-	-	-		
7	7/8	22.22	22	27	22	22	38	38	15		
-	0.984	25.00	-	25	-	3	-	-	-		
8	1	25.40	25	31	25	25	44	44	17		
10	1-1/4	31.75	32	38	31	31	54	54	21		
-	1.260	32.00	-	32	-	-	-	-	-		

6 thickness			
thickness		symbol	
in	mm	inch	metric
1/32	0.79	0.5(1)	-
1/16	1.59	1(2)	01
5/64	1.98	1.2	T1
3/32	2.38	1.5(3)	02
1/8	3.18	2	03
5/22	3.97	2.5	T3
3/16	4.76	3	04
7/32	5.56	3.5	05
1/4	6.35	4	06
5/16	7.94	5	07
3/8	9.52	6	09
7/16	11.11	7	11
1/2	12.70	8	12

NOTE: Inch sizes in parenthesis for "Alternate sizes" D or E (under 1/4 inch IC.)

8	hand of insert (optional)

7 corner radius			
corner radius		symbol	
in	mm	inch	metric
.004	0.1	0	01
.008	0.2	0.5	02
1/64	0.4	1	04
1/32	0.8	2	08
3/64	1.2	3	12
1/16	1.6	4	16
5/64	2.0	5	20
3/32	2.4	6	24
7/64	2.8	7	28
1/8	3.2	8	32
round insert (inch)	-	-	00
round insert (metric)	-	-	M0

9 & 10	cutting edge condition or chip control features (optional)
T	negative land
K	light feed chip control, double sided Kenicor insert
M	heavy feed chip control, deep floor Kenicor
N	narrow land control insert with chip control on one side
W	heavy-duty chip control, wide land Kenicor insert one side
J	polished to 4-microinch A4 (rake face only)
UF	ultra-fine finishing
See Technical Section for additional conditions and chip control features	

NOTE: Inch sizes in parenthesis for "alternate sizes" D or E (under 1/4 inch IC.)



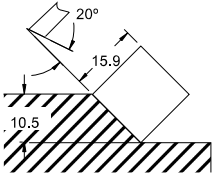
Insert For Face Mill Cutter



EXAMPLE

Positive
Axial Rake
Radial Rake

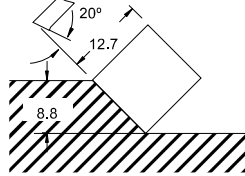
45°



5/8 x 3/16 Insert
SEC 53
SECN 1504
SEKN 1504
FOR SE-545

Positive
Axial Rake
Radial Rake

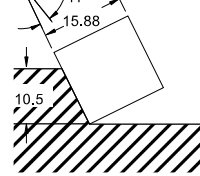
45°



1/2 x 1/8 Insert
SEC 42
SECN 1203
SEKN 1203
FOR SE-445

Positive
Axial Rake
Positive
Radial Rake

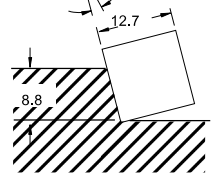
65°



5/8 x 3/16 Insert
SPU-53, SPCN 1504
SPG-53, SPKN 1504
FOR SP-TYPE

Positive
Axial Rake
Radial Rake

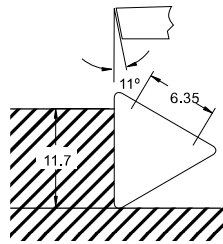
75°



1/2 x 1/8 Insert
SPU-42, SPKN 1203
SPG-42, SPMN 1203
FOR FP-TYPE

Positive
Axial Rake

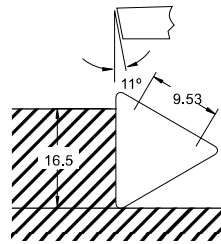
90°



1/4 x 3/32 Insert
TPG-21
TPMN 1102
FOR SAE-TYPE

Positive
Axial Rake

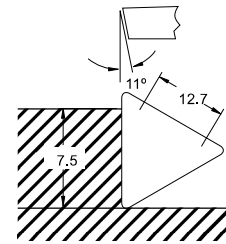
90°



3/8 x 1/8 Insert
TPU-32
TPG-32
TPMN 1603
TPCN 1603
FOR SAE-TYPE

Positive
Axial Rake
Radial Rake

90°



1/2 x 3/16 Insert
TPK-43
TPKN 2204
TPMN 2204
FOR TP-TYPE





Solid Carbide End Mills For <48HRC



Micro Grain 10% Co Grade
2 Flute



Suit For Materials Groups

GR.1 Non alloyed steels Alloyed Steels	GR.2 Heat resistant steels Stainless steels	GR.3 Hardened steels < 48 HRC	GR.4 Hardened steels 48-56 HRC
GR.5 Hardened steels 56-68 HRC	GR.6 Iron	GR.7 Titanium	GR.8 Nickel
GR.9 Copper Brass Bronze	GR.10 Aluminium	GR.11 Synthetic materials	GR.12 Composite materials

Standard Length(Order No. VE122F-Dia)

Unit:mm

ORDER NO.	Dia of Mill Tol e8	Shank Dia mm	Flute Length mm	Overall Length mm	CODE NO.
VE122-1.0	1.0	4	3	50	6007-020
VE122-1.5	1.5	4	5	50	6007-021
VE122-2.0	2.0	4	6	50	6007-022
VE122-2.5	2.5	4	8	50	6007-023
VE122-3.0	3.0	6	8	50	6007-024
VE122-3.5	3.5	6	10	50	6007-025
VE122-4.0	4.0	6	11	50	6007-026
VE122-4.5	4.5	6	11	50	6007-027
VE122-5.0	5.0	6	13	50	6007-028
VE122-5.5	5.5	6	13	50	6007-029
VE122-6.0	6.0	6	16	50	6007-030
VE122-7.0	7.0	8	20	60	6007-031
VE122-8.0	8.0	8	20	60	6007-032
VE122-9.0	9.0	10	22	72	6007-033
VE122-10.0	10.0	10	25	72	6007-034
VE122-11.0	11.0	12	26	75	6007-035
VE122-12.0	12.0	12	30	75	6007-036
VE122-14.0	14.0	16	32	90	6007-037
VE122-16.0	16.0	16	40	100	6007-038
VE122-18.0	18.0	20	40	100	6007-039
VE122-20.0	20.0	20	40	100	6007-040

Stub Length(Order No. VE112F-Dia)

Unit:mm

ORDER NO.	Dia of Mill Tol e8	Shank Dia mm	Flute Length mm	Overall Length mm	CODE NO.
VE112-1.0	1.0	3	3.0	38	6007-001
VE112-1.5	1.5	3	5.0	38	6007-002
VE112-2.0	2.0	3	6.0	38	6007-003
VE112-2.5	2.5	3	8.0	38	6007-004
VE112-3.0	3.0	3	8.0	38	6007-005
VE112-3.5	3.5	4	10.0	50	6007-006
VE112-4.0	4.0	4	11.0	50	6007-007
VE112-4.5	4.5	5	11.0	50	6007-008
VE112-5.0	5.0	5	13.0	50	6007-009
VE112-5.5	5.5	6	13.0	50	6007-010
VE112-6.0	6.0	6	16.0	50	6007-011

Long Length(Order No. VE125F-Dia)

Unit:mm

ORDER NO.	Dia of Mill Tol e8	Shank Dia mm	Flute Length mm	Overall Length mm	CODE NO.
VE125-3	3	6	12	70	6007-050
VE125-4	4	6	15	70	6007-051
VE125-5	5	6	20	80	6007-052
VE125-6	6	6	20	80	6007-053
VE125-8	8	8	25	100	6007-055
VE125-10	10	10	30	100	6007-057
VE125-12	12	12	35	110	6007-059
VE125-14	14	16	40	120	6007-060
VE125-16	16	16	50	140	6007-061
VE125-20	20	20	55	160	6007-062

Extra Long Length(Order No. VE127F-Dia)

Unit:mm

ORDER NO.	Dia of Mill Tol e8	Shank Dia mm	Flute Length mm	Overall Length mm	CODE NO.
VE127-3	3	6	12	100	6007-070
VE127-4	4	6	15	100	6007-071
VE127-5	5	6	20	100	6007-072
VE127-6	6	6	20	100	6007-073
VE127-8	8	8	25	150	6007-074
VE127-10	10	10	30	150	6007-075
VE127-12	12	12	35	180	6007-076
VE127-16	16	16	50	2100	6007-077
VE127-20	20	20	55	2100	6007-078

Solid Carbide End Mills For <48HRC

Micro Grain 10% Co Grade
4 Flute



Suit For Materials Groups

GR.1 Non alloyed steels Alloyed Steels	GR.2 Heat resistant steels Stainless steels	GR.3 Hardened steels < 48 HRC	GR.4 Hardened steels 48-56 HRC
GR.5 Hardened steels 56-68 HRC	GR.6 Iron	GR.7 Titanium	GR.8 Nickel
GR.9 Copper Brass Bronze	GR.10 Aluminium	GR.11 Synthetic materials	GR.12 Composite materials

Standard Length(Order No. VE124F-Dia)

Unit:mm

ORDER NO.	Dia of Mill Tol e8	Shank Dia mm	Flute Length mm	Overall Length mm	CODE NO.
VE124-1.0	1.0	4	3	50	6007-100
VE124-1.5	1.5	4	5	50	6007-101
VE124-2.0	2.0	4	6	50	6007-102
VE124-2.5	2.5	4	8	50	6007-103
VE124-3.0	3.0	6	8	50	6007-104
VE124-3.5	3.5	6	10	50	6007-105
VE124-4.0	4.0	6	11	50	6007-106
VE124-4.5	4.5	6	11	50	6007-107
VE124-5.0	5.0	6	13	50	6007-108
VE124-5.5	5.5	6	13	50	6007-109
VE124-6.0	6.0	6	16	50	6007-110
VE124-7.0	7.0	8	20	60	6007-111
VE124-8.0	8.0	8	20	60	6007-112
VE124-9.0	9.0	10	22	72	6007-113
VE124-10.0	10.0	10	25	72	6007-114
VE124-11.0	11.0	12	26	75	6007-115
VE124-12.0	12.0	12	30	75	6007-116
VE124-14.0	14.0	16	32	90	6007-117
VE124-16.0	16.0	16	38	100	6007-118
VE124-18.0	18.0	20	38	100	6007-119
VE124-20.0	20.0	20	38	100	6007-120

Stub Length(Order No. VE114F-Dia)

Unit:mm

ORDER NO.	Dia of Mill Tol e8	Shank Dia mm	Flute Length mm	Overall Length mm	CODE NO.
VE114-1.0	1.0	3	3.0	38	6007-080
VE114-1.5	1.5	3	5.0	38	6007-081
VE114-2.0	2.0	3	6.0	38	6007-082
VE114-2.5	2.5	3	7.0	38	6007-083
VE114-3.0	3.0	3	9.0	38	6007-084
VE114-3.5	3.5	4	10.0	50	6007-085
VE114-4.0	4.0	4	11.0	50	6007-086
VE114-4.5	4.5	5	11.0	50	6007-087
VE114-5.0	5.0	5	13.0	50	6007-088
VE114-5.5	5.5	6	13.0	50	6007-089
VE114-6.0	6.0	6	16.0	50	6007-090

Long Length(Order No. VE126F-Dia)

Unit:mm

ORDER NO.	Dia of Mill Tol e8	Shank Dia mm	Flute Length mm	Overall Length mm	CODE NO.
VE126-3	3	4	12	70	6007-130
VE126-4	4	4	15	70	6007-131
VE126-5	5	6	20	80	6007-132
VE126-6	6	6	20	80	6007-133
VE126-8	8	8	25	100	6007-135
VE126-10	10	10	30	100	6007-137
VE126-12	12	12	35	110	6007-139
VE126-14	14	16	40	120	6007-140
VE126-16	16	16	50	140	6007-141
VE126-20	20	20	55	160	6007-142



Solid Carbide Ball Nose End Mills For <48HRC



Micro Grain 10% Co Grade
2 Flute



Suit For Materials Groups

GR.1 Non alloyed steels Alloyed Steels	GR.2 Heat resistant steels Stainless steels	GR.3 Hardened steels < 48 HRC	GR.4 Hardened steels 48-56 HRC
GR.5 Hardened steels 56-68 HRC	GR.6 Iron	GR.7 Titanium	GR.8 Nickel
GR.9 Copper Brass Bronze	GR.10 Aluminium	GR.11 Synthetic materials	GR.12 Composite materials

Standard Length(Order No. VB222F-Dia)

Unit:mm

ORDER NO.	Dia of Mill Tol e8	Shank Dia mm	Flute Length mm	Overall Length mm	CODE NO.
VB222-1	1.00x0.50R	4	2.5	50	6007-180
VB222-1.5	1.50x0.75R	4	4	50	6007-181
VB222-2	2.00x1.00R	4	5	50	6007-182
VB222-2.5	2.50x1.25R	4	6	50	6007-183
VB222-3	3.00x1.50R	6	6	50	6007-184
VB222-4	4.00x2.00R	6	8	50	6007-186
VB222-5	5.00x2.50R	6	10	50	6007-188
VB222-6	6.00x3.00R	6	12	50	6007-190
VB222-7	7.00x3.50R	8	14	60	6007-191
VB222-8	8.00x4.00R	8	14	60	6007-192
VB222-9	9.00x4.50R	10	18	72	6007-193
VB222-10	10.00x5.00R	10	18	72	6007-194
VB222-12	12.00x6.00R	12	22	75	6007-196
VB222-14	14.00x7.00R	16	26	100	6007-197
VB222-16	16.00x8.00R	16	30	100	6007-198
VB222-20	20.00x10.0R	20	38	100	6007-200

Stub Length(Order No. VB221F-Dia)

Unit:mm

ORDER NO.	Dia of Mill Tol e8	Shank Dia mm	Flute Length mm	Overall Length mm	CODE NO.
VB221-1	1.0x0.50R	3	2.5	38	6007-160
VB221-1.5	1.5x0.75R	3	4.0	38	6007-161
VB221-2	2.0x1.00R	3	5.0	38	6007-162
VB221-2.5	2.5x1.25R	3	6.0	38	6007-163
VB221-3	3.0x1.50R	3	6.0	38	6007-164
VB221-3.5	3.5x1.75R	4	8.0	50	6007-165
VB221-4	4.0x2.00R	4	8.0	50	6007-166
VB221-4.5	4.5x2.25R	5	10.0	50	6007-167
VB221-5	5.0x2.50R	5	10.0	50	6007-168
VB221-5.5	5.5x2.75R	6	12.0	50	6007-169
VB221-6	6.0x3.00R	6	12.0	50	6007-170

Long Length(Order No. VB232F-Dia)

Unit:mm

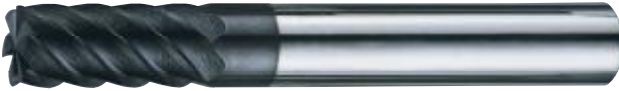
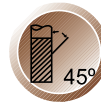
ORDER NO.	Dia of Mill Tol e8	Shank Dia mm	Flute Length mm	Overall Length mm	CODE NO.
VB232-3	3.0x1.50R	6	6	70	6007-210
VB232-4	4.0x2.00R	6	8	70	6007-211
VB232-5	5.0x2.50R	6	10	80	6007-212
VB232-6	6.0x3.00R	6	12	80	6007-213
VB232-8	8.0x4.00R	8	14	100	6007-215
VB232-10	10.0x5.00R	10	18	100	6007-217
VB232-12	12.0x6.00R	12	22	110	6007-219
VB232-14	14.0x7.00R	16	26	120	6007-220
VB232-16	16.0x8.00R	16	30	140	6007-221
VB232-20	20.0x10.0R	20	38	160	6007-222



Solid Carbide End Mills For <68HRC



Ultra Micro Grain 12% Co Grade
6 Flute



Suit For Materials Groups

GR.1 Non alloyed steels Alloyed Steels	GR.2 Heat resistant steels Stainless steels	GR.3 Hardened steels < 48 HRC	GR.4 Hardened steels 48-56 HRC
GR.5 Hardened steels 56-68 HRC	GR.6 Iron	GR.7 Titanium	GR.8 Nickel
GR.9 Copper Brass Bronze	GR.10 Aluminium	GR.11 Synthetic materials	GR.12 Composite materials

Standard Length(Order No. VE166X-Dia)

Unit:mm

ORDER NO.	Dia of Mill Tol e8	Shank Dia mm	Flute Length mm	Overall Length mm	CODE NO.
VE166-3	3	6	8	50	6007-240
VE166-4	4	6	11	50	6007-241
VE166-5	5	6	13	50	6007-242
VE166-6	6	6	16	50	6007-243
VE166-8	8	8	20	60	6007-244
VE166-10	10	10	22	72	6007-245
VE166-12	12	12	26	75	6007-246
VE166-16	16	16	38	100	6007-247
VE166-20	20	20	38	100	6007-248

Long Length(Order No. VE167X-Dia)

Unit:mm

ORDER NO.	Dia of Mill Tol e8	Shank Dia mm	Flute Length mm	Overall Length mm	CODE NO.
VE167-6	6	6	26	80	6007-250
VE167-8	8	8	36	100	6007-251
VE167-10	10	10	46	100	6007-252
VE167-12	12	12	56	110	6007-253
VE167-16	16	16	66	140	6007-254
VE167-20	20	20	76	160	6007-255



4 Flute Carbide End Mill Set VE124 18PCS/SET In Wooden Box With

ORDER NO.VE124-A CODE NO.6007-257



NEW



SET INCLUDING

VE124-3.0X3PCS
VE124-4.0X3PCS
VE124-6.0X3PCS
VE124-8.0X3PCS
VE124-10.0X3PCS
VE124-12.0X3PCS



2 Flute Carbide Ball Nose End Mill Set VB222 9PCS/SET In Wooden Box With

ORDER NO.VB222-A CODE NO.6007-258

NEW



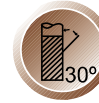
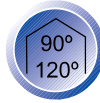
SET INCLUDING

VB222-4X3PCS
VB222-6X3PCS
VB222-8X3PCS



Solid Carbide NC/CNC Spot Drills

Micro Grain 10% Co Grade



Suit For Materials Groups

GR.1 Non alloyed steels Alloyed Steels	GR.2 Heat resistant steels Stainless steels	GR.3 Hardened steels < 48 HRC	GR.4 Hardened steels 48-56 HRC
GR.5 Hardened steels 56-68 HRC	GR.6 Iron	GR.7 Titanium	GR.8 Nickel
GR.9 Copper Brass Bronze	GR.10 Aluminium	GR.11 Synthetic materials	GR.12 Composite materials

Standard Length 90° Angle(Order No. VD903-Dia) Unit:mm

ORDER NO.	Dia of Mill Tol e8	Shank Dia mm	Flute Length mm	Overall Length mm	CODE NO.
VD903-3	3	3	10	38	6007-260
VD903-4	4	4	12	50	6007-261
VD903-5	5	5	15	50	6007-262
VD903-6	6	6	20	60	6007-263
VD903-8	8	8	25	60	6007-264
VD903-10	10	10	25	72	6007-265
VD903-12	12	12	30	75	6007-266
VD903-16	16	16	35	100	6007-267
VD903-20	20	20	40	100	6007-268

Standard Length 120° Angle(Order No. VD913-Dia) Unit:mm

ORDER NO.	Dia of Mill Tol e8	Shank Dia mm	Flute Length mm	Overall Length mm	CODE NO.
VD913-3	3	3	10	38	6007-270
VD913-4	4	4	12	50	6007-271
VD913-5	5	5	15	50	6007-272
VD913-6	6	6	20	60	6007-273
VD913-8	8	8	25	60	6007-274
VD913-10	10	10	25	72	6007-275
VD913-12	12	12	30	75	6007-276
VD913-16	16	16	35	100	6007-277
VD913-20	20	20	40	100	6007-278

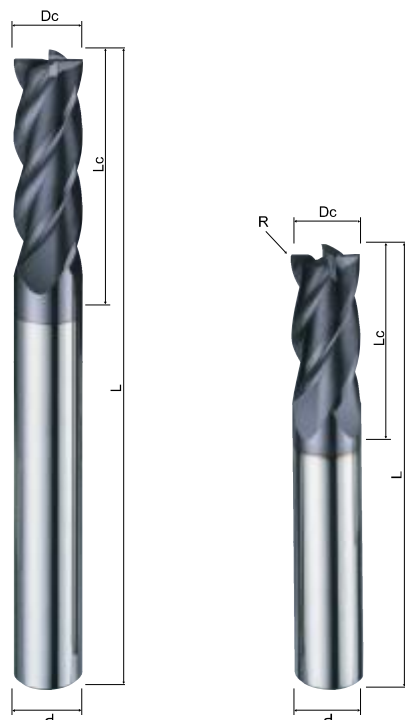
Long Length 90° Angle(Order No. VD904-Dia) Unit:mm

ORDER NO.	Dia of Mill Tol e8	Shank Dia mm	Flute Length mm	Overall Length mm	CODE NO.
VD904-6	6	6	20	100	6007-280
VD904-8	8	8	25	125	6007-281
VD904-10	10	10	25	150	6007-282
VD904-12	12	12	30	150	6007-283
VD904-16	16	16	35	150	6007-284
VD904-20	20	20	40	150	6007-285

Long Length 120° Angle(Order No. VD914-Dia) Unit:mm

ORDER NO.	Dia of Mill Tol e8	Shank Dia mm	Flute Length mm	Overall Length mm	CODE NO.
VD914-6	6	6	20	100	6007-290
VD914-8	8	8	25	125	6007-291
VD914-10	10	10	25	150	6007-292
VD914-12	12	12	30	150	6007-293
VD914-16	16	16	35	150	6007-294
VD914-20	20	20	40	150	6007-295

Finishing End Mills <56HRC



Work Material

GR.1 Steels	GR.2 Heat resistant steels Stainless steels	GR.3 < 48 HRC	GR.4 48-56 HRC
GR.5 Hardened steels 56-68 HRC	GR.6 Iron	GR.7 Titanium	GR.8 Nickel
GR.9 Copper Brass Bronze	GR.10 Aluminium	GR.11 Synthetic materials	GR.12 Composite materials

Standard Length(Order No. VE164X-Dc)

Unit:mm

ORDER NO.	Dc e8	Lc mm	L mm	d h6	CODE NO.
VE164-1.0	1.0	3	50	4	6007-300
VE164-1.5	1.5	5	50	4	6007-301
VE164-2.0	2.0	6	50	4	6007-302
VE164-2.5	2.5	8	50	4	6007-303
VE164-3.0	3.0	8	50	6	6007-304
VE164-4.0	4.0	11	50	6	6007-306
VE164-5.0	5.0	13	50	6	6007-308
VE164-6.0	6.0	16	50	6	6007-310
VE164-8.0	8.0	20	60	8	6007-312
VE164-10.0	10.0	25	72	10	6007-314
VE164-12.0	12.0	30	75	12	6007-316
VE164-14.0	14.0	32	90	16	6007-317
VE164-16.0	16.0	40	100	16	6007-318
VE164-18.0	18.0	40	100	20	6007-319
VE164-20.0	20.0	40	100	20	6007-320

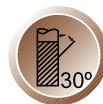
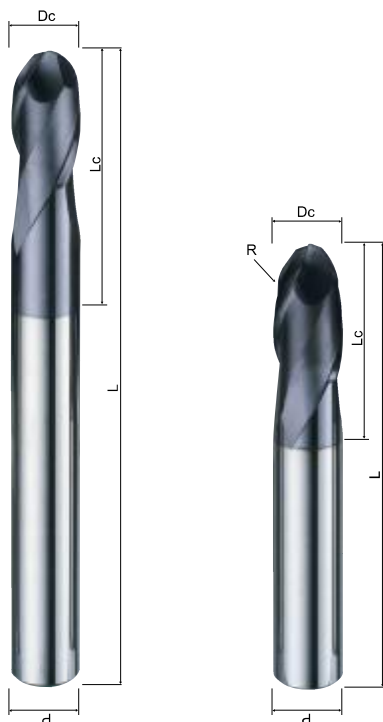
Long Length(Order No. VE165X-Dc)

Unit:mm

ORDER NO.	Dc e8	Lc mm	L mm	d h6	CODE NO.
VE165-3	3	12	70	6	6007-330
VE165-4	4	15	70	6	6007-331
VE165-5	5	20	80	6	6007-332
VE165-6	6	20	80	6	6007-333
VE165-8	8	25	100	8	6007-335
VE165-10	10	30	100	10	6007-337
VE165-12	12	35	110	12	6007-339
VE165-14	14	40	120	16	6007-340
VE165-16	16	50	140	16	6007-341
VE165-20	20	55	160	20	6007-342



Ball Nose End Mills <56HRC



Work Material

GR.1 Steels	GR.2 Heat resistant steels Stainless steels	GR.3 < 48 HRC	GR.4 48-56 HRC
GR.5 Hardened steels 56-68 HRC	GR.6 Iron	GR.7 Titanium	GR.8 Nickel
GR.9 Copper Brass Bronze	GR.10 Aluminium	GR.11 Synthetic materials	GR.12 Composite materials

Standard Length(Order No. VB262X-Dc)

Unit:mm

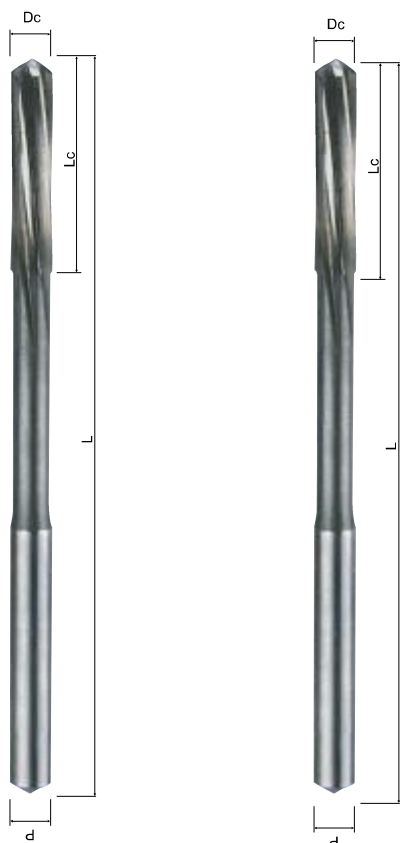
ORDER NO.	Dc e8	R ±0.01	LC mm	L mm	d h6	CODE NO.
VB262-1.0	1.0	0.5R	2	50	4	6007-350
VB262-1.5	1.5	0.75R	3	50	4	6007-351
VB262-2.0	2.0	1.0R	4	50	4	6007-352
VB262-2.5	2.5	1.25R	5	50	4	6007-353
VB262-3.0	3.0	1.5R	6	50	6	6007-354
VB262-4.0	4.0	2.0R	8	50	6	6007-355
VB262-5.0	5.0	2.5R	10	50	6	6007-356
VB262-6.0	6.0	3.0R	12	50	6	6007-357
VB262-8.0	8.0	4.0R	14	60	8	6007-359
VB262-10.0	10.0	5.0R	18	72	10	6007-361
VB262-12.0	12.0	6.0R	22	75	12	6007-362
VB262-14.0	14.0	7.0R	26	100	16	6007-363
VB262-16.0	16.0	8.0R	30	100	16	6007-364
VB262-20.0	20.0	10.0R	38	100	20	6007-365

Long Length(Order No. VB263X-Dc)

Unit:mm

ORDER NO.	Dc e8	R ±0.01	LC mm	L mm	d h6	CODE NO.
VB263-3	3	1.5R	8	70	6	6007-374
VB263-4	4	2.0R	8	70	6	6007-375
VB263-5	5	2.5R	10	80	6	6007-376
VB263-6	6	3.0R	12	80	6	6007-377
VB263-8	8	4.0R	14	100	8	6007-379
VB263-10	10	5.0R	18	100	10	6007-381
VB263-12	12	6.0R	22	110	12	6007-382
VB263-14	14	7.0R	26	120	16	6007-383
VB263-16	16	8.0R	30	140	16	6007-384
VB263-20	20	10.0R	38	160	20	6007-385

Machine Reamers In Steps of 0.5mm



Work Material

GR.1 Steels	GR.2 Heat resistant steels Stainless steels	GR.3 < 48 HRC	GR.4 48-56 HRC
GR.5 Hardened steels 56-68 HRC	GR.6 Iron	GR.7 Titanium	GR.8 Nickel
GR.9 Copper	GR.10 Aluminium	GR.11 Synthetic materials	GR.12 Composite materials

- ※ 2.0-9.0 VHM Solid Carbide
- ※ 10.0-20.0 HM Carbide Tipped

Straight Shank(Order No. VR301-Dc)

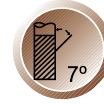
Unit:mm

ORDER NO.	Dc H7	Lc mm	L mm	d mm	Z teeth	CODE NO.
VR301-2.0	2.0	11	49	2.0	4	6007-390
VR301-2.5	2.5	14	57	2.5	4	6007-391
VR301-3.0	3.0	15	61	3.0	4	6007-392
VR301-3.5	3.5	18	70	3.5	4	6007-393
VR301-4.0	4.0	19	75	4.0	4	6007-394
VR301-4.5	4.5	21	80	4.5	4	6007-395
VR301-5.0	5.0	23	86	5.0	6	6007-396
VR301-5.5	5.5	26	93	5.5	6	6007-397
VR301-6.0	6.0	26	93	6.0	6	6007-398
VR301-7.0	7.0	31	109	7.0	6	6007-400
VR301-8.0	8.0	33	117	8.0	6	6007-402
VR301-9.0	9.0	36	125	9.0	6	6007-404
VR301-10.0	10.0	38	133	10.0	6	6007-406

※ 2.0-9.0 VHM Solid Carbide ※ 10.0-20.0 HM Carbide Tipped

ORDER NO.	Dc H7	Lc mm	L mm	d mm	Z teeth	CODE NO.
VR301-11.0	11.0	41	142	10.0	6	6007-408
VR301-12.0	12.0	44	151	10.0	6	6007-410
VR301-13.0	13.0	44	151	10.0	6	6007-412
VR301-14.0	14.0	47	160	12.5	6	6007-414
VR301-15.0	15.0	50	162	12.5	6	6007-416
VR301-16.0	16.0	52	170	12.5	6	6007-418
VR301-17.0	17.0	54	175	14.0	6	6007-419
VR301-18.0	18.0	56	182	14.0	6	6007-420
VR301-19.0	19.0	58	189	16.0	6	6007-421
VR301-20.0	20.0	60	195	16.0	6	6007-422

Machine Reamers Carbide Tipped



Work Material

GR.1 Steels	GR.2 Heat resistant steels Stainless steels	GR.3 < 48 HRC	GR.4 48-56 HRC
GR.5 Hardened steels 56-68 HRC	GR.6 Iron	GR.7 Titanium	GR.8 Nickel
GR.9 Copper	GR.10 Aluminium	GR.11 Synthetic materials	GR.12 Composite materials

Taper Shank(Order No. VR303-Dc)

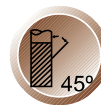
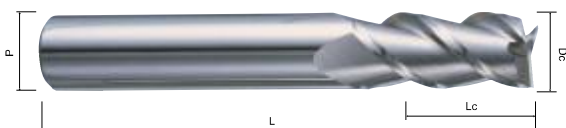
Unit:mm

ORDER NO.	Dc H7	Lc mm	L mm	d mt	Z teeth	CODE NO.
VR303-10.0	10.0	38	168	1	6	6007-430
VR303-11.0	11.0	41	175	1	6	6007-431
VR303-12.0	12.0	44	182	1	6	6007-432
VR303-13.0	13.0	44	182	1	6	6007-433
VR303-14.0	14.0	47	189	1	6	6007-434
VR303-15.0	15.0	50	204	2	6	6007-435
VR303-16.0	16.0	52	210	2	6	6007-436
VR303-17.0	17.0	54	214	2	6	6007-437
VR303-18.0	18.0	56	219	2	6	6007-438
VR303-19.0	19.0	58	223	2	6	6007-439
VR303-20.0	20.0	60	228	2	6	6007-440
VR303-22.0	22.0	64	237	2	6	6007-441
VR303-24.0	24.0	68	268	3	8	6007-442

ORDER NO.	Dc H7	Lc mm	L mm	d mt	Z teeth	CODE NO.
VR303-25.0	25.0	68	268	3	8	6007-443
VR303-26.0	26.0	70	273	3	8	6007-444
VR303-28.0	28.0	71	277	3	8	6007-445
VR303-30.0	30.0	73	281	3	8	6007-446
VR303-32.0	32.0	77	317	4	8	6007-447
VR303-35.0	35.0	78	321	4	8	6007-448
VR303-36.0	36.0	79	325	4	8	6007-449
VR303-38.0	38.0	81	329	4	8	6007-450
VR303-40.0	40.0	81	329	4	8	6007-451

Universal End Mills

Professional For Aluminium, Copper, Steels



Work Material

GR.1 Steels	GR.3 < 48 HRC	GR.7 Titanium
GR.8 Nickel	GR.9 Copper	GR.10 Aluminium

Standard Length(Order No. VE133-Dia)

Unit:mm

ORDER NO.	Dc e8	Lc mm	L mm	d h6	CODE NO.
VE133-1.0	1.0	3	38	3	6007-460
VE133-1.5	1.5	5	38	3	6007-461
VE133-2.0	2.0	6	38	3	6007-462
VE133-2.5	2.5	7	38	3	6007-463
VE133-3.0	3.0	9	38	3	6007-464
VE133-4.0	4.0	14	50	4	6007-465
VE133-5.0	5.0	16	50	5	6007-466
VE133-6.0	6.0	20	63	6	6007-467
VE133-7.0	7.0	20	63	8	6007-468
VE133-8.0	8.0	20	63	8	6007-469
VE133-9.0	9.0	22	72	10	6007-470
VE133-10.0	10.0	22	72	10	6007-471
VE133-12.0	12.0	26	75	12	6007-472
VE133-14.0	14.0	30	89	14	6007-473
VE133-16.0	16.0	32	89	16	6007-474
VE133-18.0	18.0	38	100	18	6007-475
VE133-20.0	20.0	38	100	20	6007-476



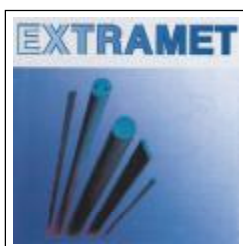
Long Length(Order No. VE135-Dia)

Unit:mm

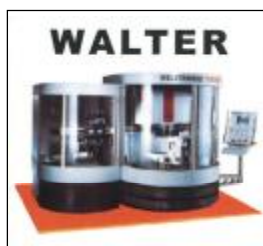
ORDER NO.	Dc e8	Lc mm	L mm	d h6	CODE NO.
VE135-3	3	20	57	3	6007-480
VE135-4	4	20	57	4	6007-481
VE135-5	5	25	63	5	6007-482
VE135-6	6	28	75	6	6007-483
VE135-7	7	30	75	8	6007-484
VE135-8	8	30	75	8	6007-485
VE135-9	9	32	75	10	6007-486
VE135-10	10	32	75	10	6007-487
VE135-12	12	50	100	12	6007-488
VE135-14	14	57	127	14	6007-489
VE135-16	16	57	127	16	6007-490
VE135-20	20	57	127	20	6007-491

GOOD MATERIAL + GOOD PROCESS MACHINE + GOOD COATING EQUIPMENT

IT'S A VERTEX EXCELENT CARBIDE END MILL



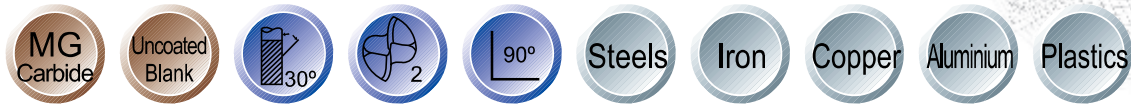
FROM SWISSLAND



FROM GERMANY



FROM SWISSLAND



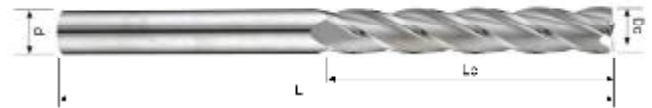
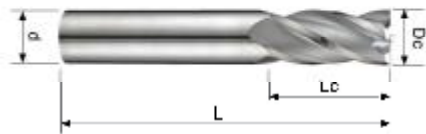
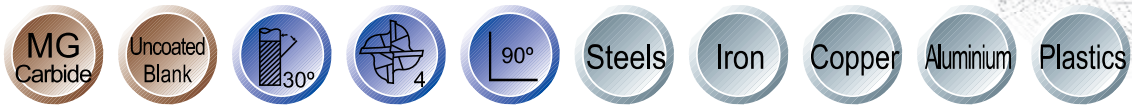
Standard Length(Order No. VEA72-Dia) Unit:mm

ORDER NO.	Dc h10	Lc mm	L mm	d h6	CODE NO.
VEA72-0.3	0.3	0.8	38	3	6008-001
VEA72-0.4	0.4	1.0	38	3	6008-002
VEA72-0.5	0.5	1.2	38	3	6008-003
VEA72-0.6	0.6	1.5	38	3	6008-004
VEA72-0.7	0.7	1.8	38	3	6008-005
VEA72-0.8	0.8	2.0	38	3	6008-006
VEA72-0.9	0.9	2.5	38	3	6008-007
VEA72-1.0	1.0	3.0	38	3	6008-008
VEA72-1.5	1.5	5.0	38	3	6008-009
VEA72-2.0	2.0	6.0	38	3	6008-010
VEA72-2.5	2.5	7.0	38	3	6008-011
VEA72-3.0	3.0	9.0	38	3	6008-012
VEA72-3.5	3.5	12.0	50	4	6008-013
VEA72-4.0	4.0	14.0	50	4	6008-014
VEA72-4.5	4.5	14.0	50	5	6008-015
VEA72-5.0	5.0	16.0	50	5	6008-016
VEA72-5.5	5.5	16.0	50	6	6008-017
VEA72-6.0	6.0	20.0	63	6	6008-018
VEA72-7.0	7.0	20.0	63	8	6008-019
VEA72-8.0	8.0	20.0	63	8	6008-020
VEA72-9.0	9.0	22.0	72	10	6008-021
VEA72-10.0	10.0	22.0	72	10	6008-022
VEA72-11.0	11.0	26.0	75	12	6008-023
VEA72-12.0	12.0	26.0	75	12	6008-024
VEA72-14.0	14.0	32.0	89	14	6008-025
VEA72-16.0	16.0	32.0	89	16	6008-026
VEA72-18.0	18.0	38.0	100	18	6008-027
VEA72-20.0	20.0	38.0	100	20	6008-028

Long Length(Order No. VEA82-Dia) Unit:mm

ORDER NO.	Dc h10	Lc mm	L mm	d h6	CODE NO.
VEA82-3	3	20	57	3	6008-040
VEA82-4	4	20	57	4	6008-041
VEA82-5	5	25	63	5	6008-042
VEA82-6	6	28	75	6	6008-043
VEA82-8	8	30	75	8	6008-044
VEA82-10	10	32	75	10	6008-045
VEA82-12	12	50	100	12	6008-046
VEA82-14	14	57	127	14	6008-047
VEA82-16	16	57	127	16	6008-048
VEA82-20	20	57	127	20	6008-049

Finishing End Mills



Standard Length(Order No. VEA74-Dia) Unit:mm

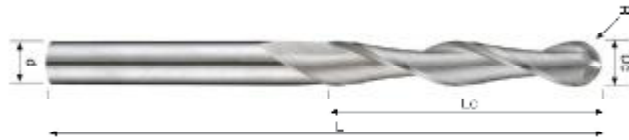
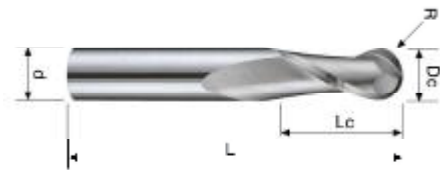
ORDER NO.	Dc h10	Lc mm	L mm	d h6	CODE NO.
VEA74-1.0	1.0	3	38	3	6008-060
VEA74-1.5	1.5	5	38	3	6008-061
VEA74-2.0	2.0	6	38	3	6008-062
VEA74-2.5	2.5	7	38	3	6008-063
VEA74-3.0	3.0	9	38	3	6008-064
VEA74-3.5	3.5	12	50	4	6008-065
VEA74-4.0	4.0	14	50	4	6008-066
VEA74-4.5	4.5	14	50	5	6008-067
VEA74-5.0	5.0	16	50	5	6008-068
VEA74-5.5	5.5	16	50	6	6008-069
VEA74-6.0	6.0	20	63	6	6008-070
VEA74-7.0	7.0	20	63	8	6008-071
VEA74-8.0	8.0	20	63	8	6008-072
VEA74-9.0	9.0	22	72	10	6008-073
VEA74-10.0	10.0	22	72	10	6008-074
VEA74-11.0	11.0	26	75	12	6008-075
VEA74-12.0	12.0	26	75	12	6008-076
VEA74-14.0	14.0	32	89	14	6008-077
VEA74-16.0	16.0	32	89	16	6008-078
VEA74-18.0	18.0	38	100	18	6008-079
VEA74-20.0	20.0	38	100	20	6008-080

Long Length(Order No. VEA84-Dia) Unit:mm

ORDER NO.	Dc h10	Lc mm	L mm	d h6	CODE NO.
VEA84-3	3	20	57	3	6008-090
VEA84-4	4	20	57	4	6008-091
VEA84-5	5	25	63	5	6008-092
VEA84-6	6	28	75	6	6008-093
VEA84-8	8	30	75	8	6008-094
VEA84-10	10	32	75	10	6008-095
VEA84-12	12	50	100	12	6008-096
VEA84-14	14	57	127	14	6008-097
VEA84-16	16	57	127	16	6008-098
VEA84-20	20	57	127	20	6008-099



Ball Nose End Mills



Standard Length(Order No. VBB12-Dia) Unit:mm

ORDER NO.	Dc h10	R ±0.01	Lc mm	L mm	d h6	CODE NO.
VBB12-0.3	0.3	0.15R	0.6	38	3	6008-100
VBB12-0.4	0.4	0.20R	0.8	38	3	6008-101
VBB12-0.5	0.5	0.25R	1.0	38	3	6008-102
VBB12-0.6	0.6	0.30R	1.2	38	3	6008-103
VBB12-0.7	0.7	0.35R	1.4	38	3	6008-104
VBB12-0.8	0.8	0.40R	1.6	38	3	6008-105
VBB12-0.9	0.9	0.45R	2.0	38	3	6008-106
VBB12-1.0	1.0	0.50R	3.0	38	3	6008-107
VBB12-1.5	1.5	0.75R	5.0	38	3	6008-108
VBB12-2.0	2.0	1.00R	6.0	38	3	6008-109
VBB12-2.5	2.5	1.25R	7.0	38	3	6008-110
VBB12-3.0	3.0	1.50R	9.0	38	3	6008-111
VBB12-3.5	3.5	1.75R	12.0	50	4	6008-112
VBB12-4.0	4.0	2.00R	14.0	50	4	6008-113
VBB12-4.5	4.5	2.25R	16.0	50	5	6008-114
VBB12-5.0	5.0	2.50R	16.0	50	5	6008-115
VBB12-5.5	5.5	2.75R	16.0	50	6	6008-116
VBB12-6.0	6.0	3.00R	20.0	63	6	6008-117
VBB12-7.0	7.0	3.50R	20.0	63	8	6008-118
VBB12-8.0	8.0	4.00R	20.0	63	8	6008-119
VBB12-9.0	9.0	4.50R	22.0	72	10	6008-120

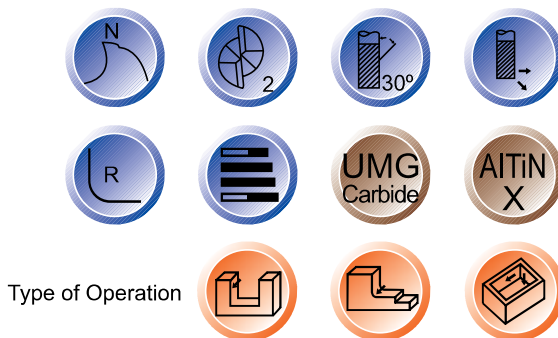
Standard Length(Order No. VBB12-Dia) Unit:mm

ORDER NO.	Dc h10	R ±0.01	Lc mm	L mm	d h6	CODE NO.
VBB12-10.0	10.0	5.00R	22.0	72	10	6008-121
VBB12-11.0	11.0	5.50R	26.0	75	12	6008-122
VBB12-12.0	12.0	6.00R	26.0	75	12	6008-123
VBB12-14.0	14.0	7.00R	32.0	89	14	6008-124
VBB12-16.0	16.0	8.00R	32.0	89	16	6008-125
VBB12-18.0	18.0	9.00R	38.0	100	18	6008-126
VBB12-20.0	20.0	10.00R	38.0	100	20	6008-127

Long Length(Order No. VBB80-Dia) Unit:mm

ORDER NO.	Dc h10	R ±0.01	Lc mm	L mm	d h6	CODE NO.
VBB80-3	3	1.5R	20	57	3	6008-140
VBB80-4	4	2.0R	20	57	4	6008-141
VBB80-5	5	2.5R	25	63	5	6008-142
VBB80-6	6	3.0R	28	75	6	6008-143
VBB80-8	8	4.0R	30	75	8	6008-144
VBB80-10	10	5.0R	32	75	10	6008-145
VBB80-12	12	6.0R	50	100	12	6008-146
VBB80-14	14	7.0R	57	127	14	6008-147
VBB80-16	16	8.0R	57	127	16	6008-148
VBB80-20	20	10.0R	57	127	20	6008-149

End Mills With Corner Radius



Work Material			
GR.1 Steels	GR.2 Stainless	GR.3 < 48 HRC	GR.4 48-56 HRC
GR.6 Iron	GR.7 Titanium	GR.8 Nickel	GR.9 Copper

Standard Length(Order No. VB625X-Dia)

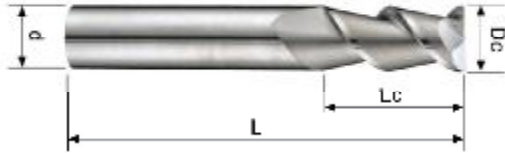
ORDER NO.	R ±0.01	Lc mm	L mm	d h6	CODE NO.
VB625-405	4.00x0.5R	11	50	6	6008-150
VB625-605	6.00x0.5R	16	50	6	6008-151
VB625-610	6.00x1.0R	16	50	6	6008-152
VB625-805	8.00x0.5R	20	60	8	6008-153
VB625-810	8.00x1.0R	20	60	8	6008-154
VB625-105	10.00x0.5R	22	72	10	6008-155
VB625-110	10.00x1.0R	22	72	10	6008-156
VB625-120	10.00x2.0R	22	72	10	6008-157
VB625-121	12.00x1.0R	26	75	12	6008-158
VB625-122	12.00x2.0R	26	75	12	6008-159

End Mills For Aluminium

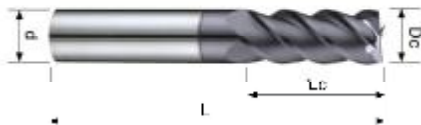


Standard Length(Order No. VEA92-Dia) Unit:mm

ORDER NO.	Dc h6	Lc mm	L mm	d h6	CODE NO.
VEA92-3	3	9	38	3	6008-160
VEA92-4	4	14	50	4	6008-161
VEA92-5	5	16	50	5	6008-162
VEA92-6	6	20	63	6	6008-163
VEA92-8	8	22	63	8	6008-164
VEA92-10	10	30	72	10	6008-165
VEA92-12	12	30	75	12	6008-166
VEA92-16	16	40	100	16	6008-167
VEA92-20	20	45	100	20	6008-168



Finishing End Mills



Standard Length(Order No. VEC40-Dia) Unit:mm

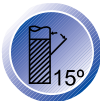
ORDER NO.	Dc h10	Lc mm	L mm	d h6	CODE NO.
VEC40-1.0	1.0	3	50	4	6008-180
VEC40-1.5	1.5	5	50	4	6008-181
VEC40-2.0	2.0	6	50	4	6008-182
VEC40-2.5	2.5	8	50	4	6008-183
VEC40-3.0A	3.0A	8	50	4	6008-184
VEC40-4.0A	4.0A	11	50	4	6008-185
VEC40-3.0	3.0	8	50	6	6008-186
VEC40-4.0	4.0	11	50	6	6008-187
VEC40-5.0	5.0	13	50	6	6008-188
VEC40-6.0	6.0	16	50	6	6008-189
VEC40-7.0	7.0	20	60	8	6008-190
VEC40-8.0	8.0	20	60	8	6008-191
VEC40-9.0	9.0	25	72	10	6008-192
VEC40-10.0	10.0	25	72	10	6008-193
VEC40-12.0	12.0	30	75	12	6008-194
VEC40-14.0	14.0	40	100	16	6008-195
VEC40-16.0	16.0	45	100	16	6008-196
VEC40-20.0	20.0	50	110	20	6008-197

Long Length(Order No. VED40-Dia) Unit:mm

ORDER NO.	Dc h10	Lc mm	L mm	d h6	CODE NO.
VED40-3	3	15	80	4	6008-200
VED40-4	4	20	80	4	6008-201
VED40-5	5	25	100	6	6008-202
VED40-6	6	30	100	6	6008-203
VED40-8	8	35	100	8	6008-204
VED40-10	10	40	100	10	6008-205
VED40-12	12	45	110	12	6008-206
VED40-14	14	55	150	16	6008-207
VED40-16	16	60	150	16	6008-208
VED40-20	20	65	150	20	6008-209



Ball Nose End Mills



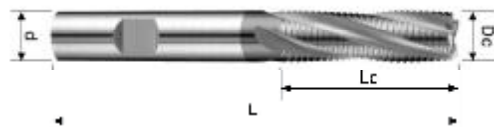
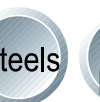
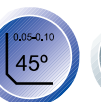
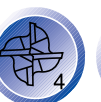
Long Length(Order No. VBB61-Dia)

Unit:mm

ORDER NO.	Dc h10	R ±0.01	Lc mm	L mm	d h6	L1 mm	CODE NO.
VBB61-1.0	1.0	0.50R	1.0	50	4	2	6008-220
VBB61-1.5	1.5	0.75R	1.5	50	4	3	6008-221
VBB61-2.0	2.0	1.00R	2.0	60	6	4	6008-222
VBB61-3.0	3.0	1.50R	3.0	70	6	6	6008-223
VBB61-4.0	4.0	2.00R	4.0	70	6	8	6008-224
VBB61-5.0	5.0	2.50R	5.0	80	6	10	6008-225
VBB61-6.0	6.0	3.00R	6.0	80	6	12	6008-226
VBB61-8.0	8.0	4.00R	8.0	100	8	16	6008-227
VBB61-10.0	10.0	5.00R	10.0	100	10	20	6008-228
VBB61-12.0	12.0	6.00R	12.0	110	12	24	6008-229



Roughing End Mills



Standard Length(Order No. VFF08-Dia)

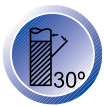
Unit:mm

ORDER NO.	Dc h10	Lc mm	L mm	d h5	CODE NO.
VFF08-6	6	13	57	6	2008-240
VFF08-8	8	19	63	8	2008-241
VFF08-10	10	22	72	10	2008-242
VFF08-12	12	26	83	12	2008-243
VFF08-14	14	26	83	14	2008-244
VFF08-16	16	32	92	16	2008-245
VFF08-18	18	32	92	18	2008-246
VFF08-20	20	38	104	20	2008-247

Long Length(Order No. VFF09-Dia)

Unit:mm

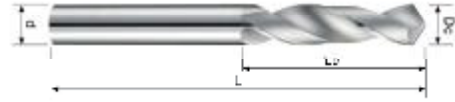
ORDER NO.	Dc h10	Lc mm	L mm	d h5	CODE NO.
VFF09-6	6	19	63	6	2008-260
VFF09-8	8	28	72	8	2008-261
VFF09-10	10	34	84	10	2008-262
VFF09-12	12	40	97	12	2008-263
VFF09-16	16	48	108	16	2008-264
VFF09-20	20	56	122	20	2008-265



Straight Shank(Order No. VDD12-Dia)

Unit:mm

ORDER NO.	Dc h7	Lc mm	L mm	CODE NO.
VDD12-1.0	1.0	6	26	6008-280
VDD12-1.1	1.1	7	28	6008-281
VDD12-1.2	1.2	8	30	6008-282
VDD12-1.3	1.3	8	30	6008-283
VDD12-1.4	1.4	9	32	6008-284
VDD12-1.5	1.5	9	32	6008-285
VDD12-1.6	1.6	10	34	6008-286
VDD12-1.7	1.7	10	34	6008-287
VDD12-1.8	1.8	11	36	6008-288
VDD12-1.9	1.9	11	36	6008-289
VDD12-2.0	2.0	12	38	6008-290
VDD12-2.1	2.1	12	38	6008-291
VDD12-2.2	2.2	13	40	6008-292
VDD12-2.3	2.3	13	40	6008-293
VDD12-2.4	2.4	14	43	6008-294
VDD12-2.5	2.5	14	43	6008-295
VDD12-2.6	2.6	14	43	6008-296
VDD12-2.7	2.7	16	46	6008-297
VDD12-2.8	2.8	16	46	6008-298
VDD12-2.9	2.9	16	46	6008-299
VDD12-3.0	3.0	16	46	6008-300
VDD12-3.1	3.1	18	49	6008-301
VDD12-3.2	3.2	18	49	6008-302
VDD12-3.3	3.3	18	49	6008-303
VDD12-3.4	3.4	20	52	6008-304
VDD12-3.5	3.5	20	52	6008-305
VDD12-3.6	3.6	20	52	6008-306
VDD12-3.7	3.7	20	52	6008-307
VDD12-3.8	3.8	22	55	6008-308
VDD12-3.9	3.9	22	55	6008-309
VDD12-4.0	4.0	22	55	6008-310
VDD12-4.1	4.1	22	55	6008-311
VDD12-4.2	4.2	22	55	6008-312
VDD12-4.3	4.3	24	58	6008-313
VDD12-4.4	4.4	24	58	6008-314
VDD12-4.5	4.5	24	58	6008-315
VDD12-4.6	4.6	24	58	6008-316
VDD12-4.7	4.7	24	58	6008-317
VDD12-4.8	4.8	26	62	6008-318
VDD12-4.9	4.9	26	62	6008-319
VDD12-5.0	5.0	26	62	6008-320
VDD12-5.1	5.1	26	62	6008-321
VDD12-5.2	5.2	26	62	6008-322
VDD12-5.3	5.3	26	62	6008-323
VDD12-5.4	5.4	28	66	6008-324
VDD12-5.5	5.5	28	66	6008-325
VDD12-5.6	5.6	28	66	6008-326
VDD12-5.7	5.7	28	66	6008-327
VDD12-5.8	5.8	28	66	6008-328
VDD12-5.9	5.9	28	66	6008-329



ORDER NO.	Dc h7	Lc mm	L mm	CODE NO.
VDD12-6.0	6.0	28	66	6008-330
VDD12-6.1	6.1	31	70	6008-331
VDD12-6.2	6.2	31	70	6008-332
VDD12-6.3	6.3	31	70	6008-333
VDD12-6.4	6.4	31	70	6008-334
VDD12-6.5	6.5	31	70	6008-335
VDD12-6.6	6.6	31	70	6008-336
VDD12-6.7	6.7	31	70	6008-337
VDD12-6.8	6.8	34	74	6008-338
VDD12-6.9	6.9	34	74	6008-339
VDD12-7.0	7.0	34	74	6008-340
VDD12-7.1	7.1	34	74	6008-341
VDD12-7.2	7.2	34	74	6008-342
VDD12-7.3	7.3	34	74	6008-343
VDD12-7.4	7.4	34	74	6008-344
VDD12-7.5	7.5	34	74	6008-345
VDD12-7.6	7.6	37	79	6008-346
VDD12-7.7	7.7	37	79	6008-347
VDD12-7.8	7.8	37	79	6008-348
VDD12-7.9	7.9	37	79	6008-349
VDD12-8.0	8.0	37	79	6008-350
VDD12-8.1	8.1	37	79	6008-351
VDD12-8.2	8.2	37	79	6008-352
VDD12-8.3	8.3	37	79	6008-353
VDD12-8.4	8.4	37	79	6008-354
VDD12-8.5	8.5	37	79	6008-355
VDD12-8.6	8.6	40	84	6008-356
VDD12-8.7	8.7	40	84	6008-357
VDD12-8.8	8.8	40	84	6008-358
VDD12-8.9	8.9	40	84	6008-359
VDD12-9.0	9.0	40	84	6008-360
VDD12-9.1	9.1	40	84	6008-361
VDD12-9.2	9.2	40	84	6008-362
VDD12-9.3	9.3	40	84	6008-363
VDD12-9.4	9.4	40	84	6008-364
VDD12-9.5	9.5	40	84	6008-365
VDD12-9.6	9.6	43	89	6008-366
VDD12-9.7	9.7	43	89	6008-367
VDD12-9.8	9.8	43	89	6008-368
VDD12-9.9	9.9	43	89	6008-369
VDD12-10.0	10.0	43	89	6008-370
VDD12-10.2	10.2	43	89	6008-371
VDD12-10.5	10.5	43	89	6008-372
VDD12-11.0	11.0	47	95	6008-373
VDD12-11.5	11.5	47	95	6008-374
VDD12-12.0	12.0	51	102	6008-375
VDD12-13.0	13.0	51	102	6008-376



Straight Shank(Order No. VDD13-Dia)

Unit:mm

ORDER NO.	Dc h7	Lc mm	L mm	CODE NO.
VDD13-1.0	1.0	12	34	6008-390
VDD13-1.1	1.1	14	36	6008-391
VDD13-1.2	1.2	16	38	6008-392
VDD13-1.3	1.3	16	38	6008-393
VDD13-1.4	1.4	18	40	6008-394
VDD13-1.5	1.5	18	40	6008-395
VDD13-1.6	1.6	20	43	6008-396
VDD13-1.7	1.7	20	43	6008-397
VDD13-1.8	1.8	22	46	6008-398
VDD13-1.9	1.9	22	46	6008-399
VDD13-2.0	2.0	24	49	6008-400
VDD13-2.1	2.1	24	49	6008-401
VDD13-2.2	2.2	27	53	6008-402
VDD13-2.3	2.3	27	53	6008-403
VDD13-2.4	2.4	30	57	6008-404
VDD13-2.5	2.5	30	57	6008-405
VDD13-2.6	2.6	30	57	6008-406
VDD13-2.7	2.7	33	61	6008-407
VDD13-2.8	2.8	33	61	6008-408
VDD13-2.9	2.9	33	61	6008-409
VDD13-3.0	3.0	33	61	6008-410
VDD13-3.1	3.1	36	65	6008-411
VDD13-3.2	3.2	36	65	6008-412
VDD13-3.3	3.3	36	65	6008-413
VDD13-3.4	3.4	39	70	6008-414
VDD13-3.5	3.5	39	70	6008-415
VDD13-3.6	3.6	39	70	6008-416
VDD13-3.7	3.7	39	70	6008-417
VDD13-3.8	3.8	43	75	6008-418
VDD13-3.9	3.9	43	75	6008-419
VDD13-4.0	4.0	43	75	6008-420
VDD13-4.1	4.1	43	75	6008-421
VDD13-4.2	4.2	43	75	6008-422
VDD13-4.3	4.3	47	80	6008-423
VDD13-4.4	4.4	47	80	6008-424
VDD13-4.5	4.5	47	80	6008-425
VDD13-4.6	4.6	47	80	6008-426
VDD13-4.7	4.7	47	80	6008-427
VDD13-4.8	4.8	52	86	6008-428
VDD13-4.9	4.9	52	86	6008-429
VDD13-5.0	5.0	52	86	6008-430
VDD13-5.1	5.1	52	86	6008-431
VDD13-5.2	5.2	52	86	6008-432
VDD13-5.3	5.3	52	86	6008-433
VDD13-5.4	5.4	57	93	6008-434
VDD13-5.5	5.5	57	93	6008-435
VDD13-5.6	5.6	57	93	6008-436
VDD13-5.7	5.7	57	93	6008-437
VDD13-5.8	5.8	57	93	6008-438
VDD13-5.9	5.9	57	93	6008-439



ORDER NO.	Dc h7	Lc mm	L mm	CODE NO.
VDD13-6.0	6.0	57	93	6008-440
VDD13-6.1	6.1	63	101	6008-441
VDD13-6.2	6.2	63	101	6008-442
VDD13-6.3	6.3	63	101	6008-443
VDD13-6.4	6.4	63	101	6008-444
VDD13-6.5	6.5	63	101	6008-445
VDD13-6.6	6.6	63	101	6008-446
VDD13-6.7	6.7	63	101	6008-447
VDD13-6.8	6.8	69	109	6008-448
VDD13-6.9	6.9	69	109	6008-449
VDD13-7.0	7.0	69	109	6008-450
VDD13-7.1	7.1	69	109	6008-451
VDD13-7.2	7.2	69	109	6008-452
VDD13-7.3	7.3	69	109	6008-453
VDD13-7.4	7.4	69	109	6008-454
VDD13-7.5	7.5	69	109	6008-455
VDD13-7.6	7.6	75	117	6008-456
VDD13-7.7	7.7	75	117	6008-457
VDD13-7.8	7.8	75	117	6008-458
VDD13-7.9	7.9	75	117	6008-459
VDD13-8.0	8.0	75	117	6008-460
VDD13-8.1	8.1	75	117	6008-461
VDD13-8.2	8.2	75	117	6008-462
VDD13-8.3	8.3	75	117	6008-463
VDD13-8.4	8.4	75	117	6008-464
VDD13-8.5	8.5	75	117	6008-465
VDD13-8.6	8.6	81	125	6008-466
VDD13-8.7	8.7	81	125	6008-467
VDD13-8.8	8.8	81	125	6008-468
VDD13-8.9	8.9	81	125	6008-469
VDD13-9.0	9.0	81	125	6008-470
VDD13-9.1	9.1	81	125	6008-471
VDD13-9.2	9.2	81	125	6008-472
VDD13-9.3	9.3	81	125	6008-473
VDD13-9.4	9.4	81	125	6008-474
VDD13-9.5	9.5	81	125	6008-475
VDD13-9.6	9.6	87	133	6008-476
VDD13-9.7	9.7	87	133	6008-477
VDD13-9.8	9.8	87	133	6008-478
VDD13-9.9	9.9	87	133	6008-479
VDD13-10.0	10.0	87	133	6008-480
VDD13-10.2	10.2	87	133	6008-481
VDD13-10.5	10.5	87	133	6008-482
VDD13-11.0	11.0	94	142	6008-483
VDD13-11.5	11.5	94	142	6008-484
VDD13-12.0	12.0	101	151	6008-485
VDD13-13.0	13.0	101	151	6008-486



Straight Shank(Order No. VDD30-Dia)

Unit:mm

ORDER NO.	Dc h7	Lc mm	L mm	CODE NO.
VDD30-2.0	2.0	12	38	6008-500
VDD30-2.1	2.1	12	38	6008-501
VDD30-2.2	2.2	13	40	6008-502
VDD30-2.3	2.3	13	40	6008-503
VDD30-2.4	2.4	14	43	6008-504
VDD30-2.5	2.5	14	43	6008-505
VDD30-2.6	2.6	14	43	6008-506
VDD30-2.7	2.7	16	46	6008-507
VDD30-2.8	2.8	16	46	6008-508
VDD30-2.9	2.9	16	46	6008-509
VDD30-3.0	3.0	16	46	6008-510
VDD30-3.1	3.1	18	49	6008-511
VDD30-3.2	3.2	18	49	6008-512
VDD30-3.3	3.3	18	49	6008-513
VDD30-3.4	3.4	20	52	6008-514
VDD30-3.5	3.5	20	52	6008-515
VDD30-3.6	3.6	20	52	6008-516
VDD30-3.7	3.7	20	52	6008-517
VDD30-3.8	3.8	22	55	6008-518
VDD30-3.9	3.9	22	55	6008-519
VDD30-4.0	4.0	22	55	6008-520
VDD30-4.1	4.1	22	55	6008-521
VDD30-4.2	4.2	22	55	6008-522
VDD30-4.3	4.3	24	58	6008-523
VDD30-4.4	4.4	24	58	6008-524
VDD30-4.5	4.5	24	58	6008-525
VDD30-4.6	4.6	24	58	6008-526
VDD30-4.7	4.7	24	58	6008-527
VDD30-4.8	4.8	26	62	6008-528
VDD30-4.9	4.9	26	62	6008-529
VDD30-5.0	5.0	26	62	6008-530
VDD30-5.1	5.1	26	62	6008-531
VDD30-5.2	5.2	26	62	6008-532
VDD30-5.3	5.3	26	62	6008-533
VDD30-5.4	5.4	28	66	6008-534
VDD30-5.5	5.5	28	66	6008-535
VDD30-5.6	5.6	28	66	6008-536
VDD30-5.7	5.7	28	66	6008-537
VDD30-5.8	5.8	28	66	6008-538
VDD30-5.9	5.9	28	66	6008-539
VDD30-6.0	6.0	28	66	6008-540
VDD30-6.1	6.1	31	70	6008-541
VDD30-6.2	6.2	31	70	6008-542
VDD30-6.3	6.3	31	70	6008-543
VDD30-6.4	6.4	31	70	6008-544
VDD30-6.5	6.5	31	70	6008-545
VDD30-6.6	6.6	31	70	6008-546
VDD30-6.7	6.7	31	70	6008-547
VDD30-6.8	6.8	34	74	6008-548
VDD30-6.9	6.9	34	74	6008-549



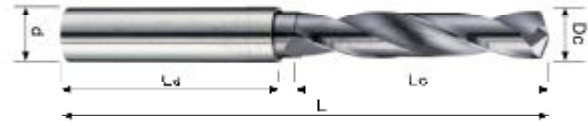
ORDER NO.	Dc h7	Lc mm	L mm	CODE NO.
VDD30-7.0	7.0	34	74	6008-550
VDD30-7.1	7.1	34	74	6008-551
VDD30-7.2	7.2	34	74	6008-552
VDD30-7.3	7.3	34	74	6008-553
VDD30-7.4	7.4	34	74	6008-554
VDD30-7.5	7.5	34	74	6008-555
VDD30-7.6	7.6	37	79	6008-556
VDD30-7.7	7.7	37	79	6008-557
VDD30-7.8	7.8	37	79	6008-558
VDD30-7.9	7.9	37	79	6008-559
VDD30-8.0	8.0	37	79	6008-560
VDD30-8.1	8.1	37	79	6008-561
VDD30-8.2	8.2	37	79	6008-562
VDD30-8.3	8.3	37	79	6008-563
VDD30-8.4	8.4	37	79	6008-564
VDD30-8.5	8.5	37	79	6008-565
VDD30-8.6	8.6	40	84	6008-566
VDD30-8.7	8.7	40	84	6008-567
VDD30-8.8	8.8	40	84	6008-568
VDD30-8.9	8.9	40	84	6008-569
VDD30-9.0	9.0	40	84	6008-570
VDD30-9.1	9.1	40	84	6008-571
VDD30-9.2	9.2	40	84	6008-572
VDD30-9.3	9.3	40	84	6008-573
VDD30-9.4	9.4	40	84	6008-574
VDD30-9.5	9.5	40	84	6008-575
VDD30-9.6	9.6	43	89	6008-576
VDD30-9.7	9.7	43	89	6008-577
VDD30-9.8	9.8	43	89	6008-578
VDD30-9.9	9.9	43	89	6008-579
VDD30-10.0	10.0	43	89	6008-580
VDD30-10.2	10.2	43	89	6008-581
VDD30-10.5	10.5	43	89	6008-582
VDD30-10.8	10.8	47	95	6008-583
VDD30-11.0	11.0	47	95	6008-584
VDD30-11.5	11.5	47	95	6008-585
VDD30-12.0	12.0	51	102	6008-586
VDD30-12.5	12.5	51	102	6008-587
VDD30-13.0	13.0	51	102	6008-588



Stud Length(Order No. VDD31-Dia)

Unit:mm

ORDER NO.	Dc h7	Lc mm	L mm	d h6	Ld mm	CODE NO.
VDD31-3.0	3.0	20	62	6	36	6008-600
VDD31-3.1	3.1	20	62	6	36	6008-601
VDD31-3.2	3.2	20	62	6	36	6008-602
VDD31-3.3	3.3	20	62	6	36	6008-603
VDD31-3.4	3.4	20	62	6	36	6008-604
VDD31-3.5	3.5	20	62	6	36	6008-605
VDD31-3.6	3.6	20	62	6	36	6008-606
VDD31-3.7	3.7	20	62	6	36	6008-607
VDD31-3.8	3.8	24	66	6	36	6008-608
VDD31-3.9	3.9	24	66	6	36	6008-609
VDD31-4.0	4.0	24	66	6	36	6008-610
VDD31-4.1	4.1	24	66	6	36	6008-611
VDD31-4.2	4.2	24	66	6	36	6008-612
VDD31-4.3	4.3	24	66	6	36	6008-613
VDD31-4.4	4.4	24	66	6	36	6008-614
VDD31-4.5	4.5	24	66	6	36	6008-615
VDD31-4.6	4.6	24	66	6	36	6008-616
VDD31-4.7	4.7	24	66	6	36	6008-617
VDD31-4.8	4.8	28	66	6	36	6008-618
VDD31-4.9	4.9	28	66	6	36	6008-619
VDD31-5.0	5.0	28	66	6	36	6008-620
VDD31-5.1	5.1	28	66	6	36	6008-621
VDD31-5.2	5.2	28	66	6	36	6008-622
VDD31-5.3	5.3	28	66	6	36	6008-623
VDD31-5.4	5.4	28	66	6	36	6008-624
VDD31-5.5	5.5	28	66	6	36	6008-625
VDD31-5.6	5.6	28	66	6	36	6008-626
VDD31-5.7	5.7	28	66	6	36	6008-627
VDD31-5.8	5.8	28	66	6	36	6008-628
VDD31-5.9	5.9	28	66	6	36	6008-629
VDD31-6.0	6.0	28	66	6	36	6008-630
VDD31-6.1	6.1	34	79	8	36	6008-631
VDD31-6.2	6.2	34	79	8	36	6008-632
VDD31-6.3	6.3	34	79	8	36	6008-633
VDD31-6.4	6.4	34	79	8	36	6008-634
VDD31-6.5	6.5	34	79	8	36	6008-635
VDD31-6.6	6.6	34	79	8	36	6008-636
VDD31-6.7	6.7	34	79	8	36	6008-637
VDD31-6.8	6.8	34	79	8	36	6008-638
VDD31-6.9	6.9	34	79	8	36	6008-639
VDD31-7.0	7.0	34	79	8	36	6008-640
VDD31-7.1	7.1	41	79	8	36	6008-641
VDD31-7.2	7.2	41	79	8	36	6008-642
VDD31-7.3	7.3	41	79	8	36	6008-643
VDD31-7.4	7.4	41	79	8	36	6008-644
VDD31-7.5	7.5	41	79	8	36	6008-645
VDD31-7.6	7.6	41	79	8	36	6008-646
VDD31-7.7	7.7	41	79	8	36	6008-647
VDD31-7.8	7.8	41	79	8	36	6008-648
VDD31-7.9	7.9	41	79	8	36	6008-649



ORDER NO.	Dc h7	Lc mm	L mm	d h6	Ld mm	CODE NO.
VDD31-8.0	8.0	41	79	8	36	6008-650
VDD31-8.1	8.1	47	89	10	40	6008-651
VDD31-8.2	8.2	47	89	10	40	6008-652
VDD31-8.3	8.3	47	89	10	40	6008-653
VDD31-8.4	8.4	47	89	10	40	6008-654
VDD31-8.5	8.5	47	89	10	40	6008-655
VDD31-8.6	8.6	47	89	10	40	6008-656
VDD31-8.7	8.7	47	89	10	40	6008-657
VDD31-8.8	8.8	47	89	10	40	6008-658
VDD31-8.9	8.9	47	89	10	40	6008-659
VDD31-9.0	9.0	47	89	10	40	6008-660
VDD31-9.1	9.1	47	89	10	40	6008-661
VDD31-9.2	9.2	47	89	10	40	6008-662
VDD31-9.3	9.3	47	89	10	40	6008-663
VDD31-9.4	9.4	47	89	10	40	6008-664
VDD31-9.5	9.5	47	89	10	40	6008-665
VDD31-9.6	9.6	47	89	10	40	6008-666
VDD31-9.7	9.7	47	89	10	40	6008-667
VDD31-9.8	9.8	47	89	10	40	6008-668
VDD31-9.9	9.9	47	89	10	40	6008-669
VDD31-10.0	10.0	47	89	10	40	6008-670
VDD31-10.2	10.2	55	102	12	45	6008-671
VDD31-10.5	10.5	55	102	12	45	6008-672
VDD31-10.8	10.8	55	102	12	45	6008-673
VDD31-11.0	11.0	55	102	12	45	6008-674
VDD31-11.5	11.5	55	102	12	45	6008-675
VDD31-12.0	12.0	55	102	12	45	6008-676
VDD31-12.5	12.5	60	107	14	45	6008-677
VDD31-13.0	13.0	60	107	14	45	6008-678
VDD31-13.5	13.5	60	107	14	45	6008-679
VDD31-14.0	14.0	60	107	14	45	6008-680
VDD31-14.5	14.5	65	115	16	48	6008-681
VDD31-15.0	15.0	65	115	16	48	6008-682
VDD31-15.5	15.5	65	115	16	48	6008-683
VDD31-16.0	16.0	65	115	16	48	6008-684
VDD31-16.5	16.5	73	123	18	48	6008-685
VDD31-17.0	17.0	73	123	18	48	6008-686
VDD31-17.5	17.5	73	123	18	48	6008-687
VDD31-18.0	18.0	73	123	18	48	6008-688
VDD31-18.5	18.5	79	131	20	50	6008-689
VDD31-19.0	19.0	79	131	20	50	6008-690
VDD31-19.5	19.5	79	131	20	50	6008-691
VDD31-20.0	20.0	79	131	20	50	6008-692



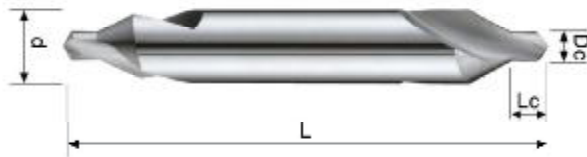
Standard Length(Order No. VDD32-Dia) Unit:mm

ORDER NO.	Dc h7	Lc mm	L mm	d h6	Ld mm	CODE NO.
VDD32-3.0	3.0	28	66	6	36	6008-700
VDD32-3.1	3.1	28	66	6	36	6008-701
VDD32-3.2	3.2	28	66	6	36	6008-702
VDD32-3.3	3.3	28	66	6	36	6008-703
VDD32-3.4	3.4	28	66	6	36	6008-704
VDD32-3.5	3.5	28	66	6	36	6008-705
VDD32-3.6	3.6	28	66	6	36	6008-706
VDD32-3.7	3.7	28	66	6	36	6008-707
VDD32-3.8	3.8	36	74	6	36	6008-708
VDD32-3.9	3.9	36	74	6	36	6008-709
VDD32-4.0	4.0	36	74	6	36	6008-710
VDD32-4.1	4.1	36	74	6	36	6008-711
VDD32-4.2	4.2	36	74	6	36	6008-712
VDD32-4.3	4.3	36	74	6	36	6008-713
VDD32-4.4	4.4	36	74	6	36	6008-714
VDD32-4.5	4.5	36	74	6	36	6008-715
VDD32-4.6	4.6	36	74	6	36	6008-716
VDD32-4.7	4.7	36	74	6	36	6008-717
VDD32-4.8	4.8	44	82	6	36	6008-718
VDD32-4.9	4.9	44	82	6	36	6008-719
VDD32-5.0	5.0	44	82	6	36	6008-720
VDD32-5.1	5.1	44	82	6	36	6008-721
VDD32-5.2	5.2	44	82	6	36	6008-722
VDD32-5.3	5.3	44	82	6	36	6008-723
VDD32-5.4	5.4	44	82	6	36	6008-724
VDD32-5.5	5.5	44	82	6	36	6008-725
VDD32-5.6	5.6	44	82	6	36	6008-726
VDD32-5.7	5.7	44	82	6	36	6008-727
VDD32-5.8	5.8	44	82	6	36	6008-728
VDD32-5.9	5.9	44	82	6	36	6008-729
VDD32-6.0	6.0	44	82	6	36	6008-730
VDD32-6.1	6.1	53	91	8	36	6008-731
VDD32-6.2	6.2	53	91	8	36	6008-732
VDD32-6.3	6.3	53	91	8	36	6008-733
VDD32-6.4	6.4	53	91	8	36	6008-734
VDD32-6.5	6.5	53	91	8	36	6008-735
VDD32-6.6	6.6	53	91	8	36	6008-736
VDD32-6.7	6.7	53	91	8	36	6008-737
VDD32-6.8	6.8	53	91	8	36	6008-738
VDD32-6.9	6.9	53	91	8	36	6008-739
VDD32-7.0	7.0	53	91	8	36	6008-740
VDD32-7.1	7.1	53	91	8	36	6008-741
VDD32-7.2	7.2	53	91	8	36	6008-742
VDD32-7.3	7.3	53	91	8	36	6008-743
VDD32-7.4	7.4	53	91	8	36	6008-744
VDD32-7.5	7.5	53	91	8	36	6008-745
VDD32-7.6	7.6	53	91	8	36	6008-746
VDD32-7.7	7.7	53	91	8	36	6008-747
VDD32-7.8	7.8	53	91	8	36	6008-748
VDD32-7.9	7.9	53	91	8	36	6008-749



ORDER NO.	Dc h7	Lc mm	L mm	d h6	Ld mm	CODE NO.
VDD32-8.0	8.0	53	91	8	36	6008-750
VDD32-8.1	8.1	61	103	10	40	6008-751
VDD32-8.2	8.2	61	103	10	40	6008-752
VDD32-8.3	8.3	61	103	10	40	6008-753
VDD32-8.4	8.4	61	103	10	40	6008-754
VDD32-8.5	8.5	61	103	10	40	6008-755
VDD32-8.6	8.6	61	103	10	40	6008-756
VDD32-8.7	8.7	61	103	10	40	6008-757
VDD32-8.8	8.8	61	103	10	40	6008-758
VDD32-8.9	8.9	61	103	10	40	6008-759
VDD32-9.0	9.0	61	103	10	40	6008-760
VDD32-9.1	9.1	61	103	10	40	6008-761
VDD32-9.2	9.2	61	103	10	40	6008-762
VDD32-9.3	9.3	61	103	10	40	6008-763
VDD32-9.4	9.4	61	103	10	40	6008-764
VDD32-9.5	9.5	61	103	10	40	6008-765
VDD32-9.6	9.6	61	103	10	40	6008-766
VDD32-9.7	9.7	61	103	10	40	6008-767
VDD32-9.8	9.8	61	103	10	40	6008-768
VDD32-9.9	9.9	61	103	10	40	6008-769
VDD32-10.0	10.0	61	103	10	40	6008-770
VDD32-10.2	10.2	71	118	12	45	6008-771
VDD32-10.5	10.5	71	118	12	45	6008-772
VDD32-10.8	10.8	71	118	12	45	6008-773
VDD32-11.0	11.0	71	118	12	45	6008-774
VDD32-11.5	11.5	71	118	12	45	6008-775
VDD32-12.0	12.0	71	118	12	45	6008-776
VDD32-12.5	12.5	77	124	14	45	6008-777
VDD32-13.0	13.0	77	124	14	45	6008-778
VDD32-13.5	13.5	77	124	14	45	6008-779
VDD32-14.0	14.0	77	124	14	45	6008-780
VDD32-14.5	14.5	83	133	16	48	6008-781
VDD32-15.0	15.0	83	133	16	48	6008-782
VDD32-15.5	15.5	83	133	16	48	6008-783
VDD32-16.0	16.0	83	133	16	48	6008-784
VDD32-16.5	16.5	93	143	18	48	6008-785
VDD32-17.0	17.0	93	143	18	48	6008-786
VDD32-17.5	17.5	93	143	18	48	6008-787
VDD32-18.0	18.0	93	143	18	48	6008-788
VDD32-18.5	18.5	101	153	20	50	6008-789
VDD32-19.0	19.0	101	153	20	50	6008-790
VDD32-19.5	19.5	101	153	20	50	6008-791
VDD32-20.0	20.0	101	153	20	50	6008-792

Combined Drill And Countersink



Standard Length(Order No. VDT08-Dia) Unit:mm

ORDER NO.	Dc h7	Lc mm	L mm	d h6	CODE NO.
VDT08-0.50	0.50	0.8	38	3	6008-800
VDT08-0.80	0.80	1.1	38	3	6008-801
VDT08-1.00	1.00	1.3	38	3	6008-802
VDT08-1.25	1.25	1.6	38	3	6008-803
VDT08-1.60	1.60	2.0	38	4	6008-804
VDT08-2.00	2.00	2.5	50	5	6008-805
VDT08-2.50	2.50	3.1	50	6	6008-806
VDT08-3.15	3.15	3.9	63	8	6008-807
VDT08-4.00	4.00	5.0	66	10	6008-808
VDT08-5.00	5.00	6.3	73	12	6008-809

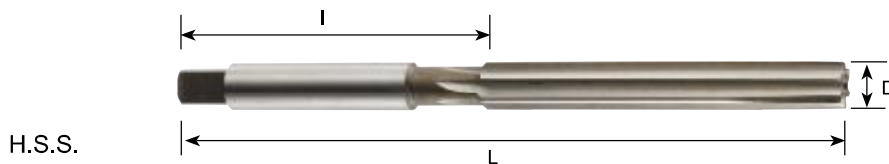
Machine Reamers Long Length



Straight Shank(Order No. VRC02-Dia) Unit:mm

ORDER NO.	Dc h7	Lc mm	L mm	d h6	Z teeth	CODE NO.
VRC02-3.0	3.0	15	100	3.0	4	6008-820
VRC02-3.5	3.5	18	112	3.5	4	6008-821
VRC02-4.0	4.0	19	119	4.0	4	6008-822
VRC02-4.5	4.5	21	126	4.5	4	6008-823
VRC02-5.0	5.0	23	132	5.0	6	6008-824
VRC02-6.0	6.0	26	139	6.0	6	6008-825
VRC02-7.0	7.0	31	156	7.0	6	6008-826
VRC02-8.0	8.0	33	165	8.0	6	6008-827
VRC02-9.0	9.0	36	175	9.0	6	6008-828
VRC02-10.0	10.0	38	184	10.0	6	6008-829
VRC02-12.0	12.0	44	205	10.0	6	6008-830
VRC02-14.0	14.0	47	214	12.5	6	6008-831
VRC02-16.0	16.0	52	227	12.5	6	6008-832
VRC02-18.0	18.0	56	241	14.0	6	6008-833
VRC02-20.0	20.0	60	254	16.0	6	6008-834

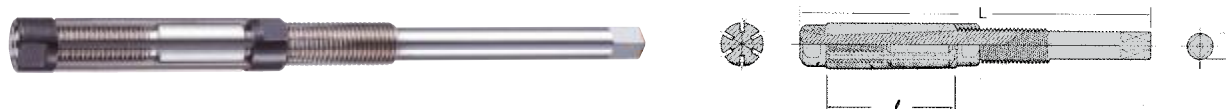
Hand Reamers - HSS



ORDER NO.	BLADE D	Total Length L	BLADE I	BLADE N	CODE NO.
VHM-03	3	72	40	6	6009-001
VHM-04	4	80	40	6	6009-002
VHM-05	5	90	45	6	6009-003
VHM-06	6	100	50	6	6009-004
VHM-07	7	105	55	6	6009-005
VHM-08	8	115	60	6	6009-006
VHM-09	9	125	65	6	6009-007
VHM-10	10	130	70	6	6009-008
VHM-11	11	140	75	6	6009-009
VHM-12	12	150	75	6	6009-010

Adjustable Reamers

Unique Quality, World Standard



Features Adjustable Reamers

- Because of you can get diameter adjust, one Adjustable reamers function possible as dozens of solid reamers.
- The spare blades save you a lot of economization

ORDER NO.	Range of Adjustment (mm)	Overall Length (mm)	Blade Length (mm)	Weight (kgs)	CODE NO.
VAR-635	6.35~7.15	83	35	0.013	6009-021
VAR-715	7.15~7.95	91	35	0.017	6009-022
VAR-795	7.95~8.70	107	38	0.026	6009-023
VAR-870	8.70~9.50	112	38	0.030	6009-024
VAR-950	9.50~10.25	121	38	0.037	6009-025
VAR-1025	10.25~11	127	38	0.045	6009-026
VAR-1100	11~12	134	42	0.059	6009-027
VAR-1200	12~13.5	141	42	0.071	6009-028
VAR-1350	13.5~15	146	45	0.090	6009-029
VAR-1500	15~16.75	166	53	0.129	6009-030
VAR-1675	16.75~18.25	172	56	0.172	6009-031
VAR-1825	18.25~19.75	178	64	0.227	6009-032
VAR-1975	19.75~21.50	188	67	0.292	6009-033
VAR-2150	21.50~23.75	204	76	0.393	6009-034
VAR-2375	23.75~27	230	83	0.525	6009-035
VAR-2700	27~30.25	254	86	0.785	6009-036
VAR-3025	30.25~34.25	280	98	0.945	6009-037
VAR-3425	34.25~38	305	109	1.36	6009-038
VAR-3800	38~46	356	113	2.11	6009-039
VAR-4600	46~56	407	128	3.60	6009-040
VAR-5600	56~70	457	124	6.14	6009-041
VAR-7000	70~85	509	135	9.87	6009-042



Outside Radius Shape End Mills

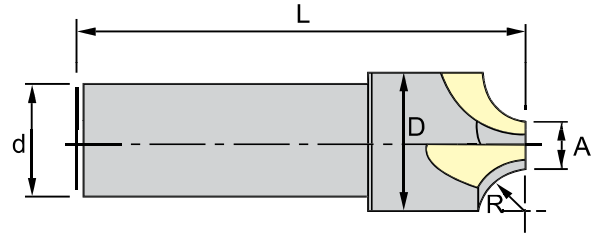


VERTEX

MATERIAL: H.S.S.

Suit For:

Plastic molds and cutting radius shape work piece.



ORDER NO.	R	End D. A	O.D.	Total L	Shank d	Blade No. N	CODE NO.
VCR-010	1	6	8	55	10	3	6009-061
VCR-020	2	6	10	60	12	3	6009-062
VCR-030	3	6	12	60	12	3	6009-063
VCR-040	4	6	14	65	12	3	6009-064
VCR-050	5	7	17	70	16	4	6009-065
VCR-060	6	8	20	75	16	4	6009-066
VCR-070	7	8	22	75	16	4	6009-067
VCR-080	8	9	25	85	20	4	6009-068
VCR-090	9	9	27	85	20	4	6009-069
VCR-100	10	10	30	95	25	4	6009-070



Counterbore End Mills

MATERIAL: H.S.S.



ORDER NO.	Dimension mm	Guide d	Blade O.D.	Shank D	CODE NO.
VCB-03	3	3.2	5.9	6	6009-081
VCB-04	4	4.2	7.4	6	6009-082
VCB-05	5	5.2	8.9	6	6009-083
VCB-06	6	6.2	10.4	8	6009-084
VCB-08	8	8.2	13.4	10	6009-085
VCB-10	10	10.3	16.8	12	6009-086
VCB-12	12	12.3	18.8	12	6009-087
VCB-14	14	14.3	24	12	6009-088
VCB-16	16	16.3	26	12	6009-089
VCB-18	18	18.3	28	12	6009-090



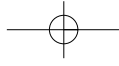
MATERIAL: SKH-9



ORDER NO.	Thickness	Ø.O.D.	CODE NO.
VSS-7505	0.5 m/m	75	6009-131
VSS-7508	0.8 m/m	75	6009-132
VSS-7510	1.0 m/m	75	6009-133
VSS-7512	1.2 m/m	75	6009-134
VSS-7515	1.5 m/m	75	6009-135
VSS-7518	1.8 m/m	75	6009-136
VSS-7520	2.0 m/m	75	6009-137

ORDER NO.	Thickness	Ø.O.D.	CODE NO.
VSS-1005	0.5 m/m	100	6009-151
VSS-1008	0.8 m/m	100	6009-152
VSS-1010	1.0 m/m	100	6009-153
VSS-1012	1.2 m/m	100	6009-154
VSS-1015	1.5 m/m	100	6009-155
VSS-1018	1.8 m/m	100	6009-156
VSS-1020	2.0 m/m	100	6009-157





MEMO





Responsibility

ACCURACY

SPEED

RESPONSIBILITY

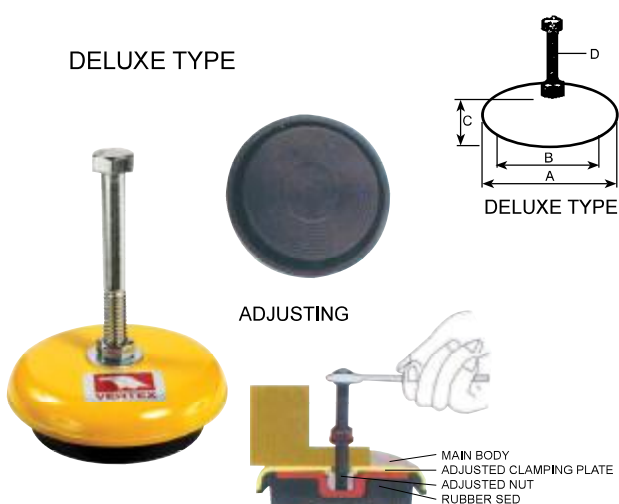
COOPERATIVE

G1	SHOCK ABSORBER
G2	ARBOR PRESSER/ SAWBELT WELDING MACHINE
G2	FLAT END MOVABLE HANDLE/ ELLIPSE MOVABLE HANDLE
G3	BALL KNOBS/HAND KNOBS/ REVOLVING HANDLES
G3	ADJUSTABLE HAND LEVERS
G4	BALL CRANK HANDLES/ 360° SWIVELLING LOCK HANDLE/ PU-HAMMER SERIES
G5	GRINDER MACHINE SERIES/ HORIZONTAL BAND SAWS
G6	MULTI-PURPOSE MILLING & DRILLING MACHINE
G7	ALL GEARED HEAD DRILL PRESS
G8	VERTICAL BAND SAWING MACHINE
G9~G12	AIR DIE TOOL
G13~G14	MAGNETIC DE-BURRING & POLISHING MACHINE
G15~G16	PRECISION DRILL GRINDER
G17	LEFT HAND DRILL GRINDER
G18	SHEET METAL DRILL GRINDER
G19~G22	PRECISION END MILL GRINDER

SMALL TYPE MACHINE



DELUXE TYPE



Special Features

Preventing shock & reducing noise. low bed design.
Easy installation. Simple adjustment. High durability.

Application

Various general working machines, metal work piece processing machine, production machine, special machine, measuring equipment, testing machine.

Electrical generator, air compressor, etc.

ADJUSTABLE RANGE 6-12 mm

Unit:mm

ORDER NO.	A	B	C	Ø DxL	LOAD KGS	WEIGHT KGS	CODE NO.
TK-90	90	50	32	12M-100	500kg	0.8	7001-000
TK-120	120	90	35	12M-100	1000kg	1.4	7001-001
TK-160	160	130	38	16M-110	1500kg	2.8	7001-002
TK-200	200	170	45	20M-120	3500kg	4.4	7001-003

Features : Easy to operate. shock-absorbent, reduces machine noise includes adjustment, and assures production accuracy.

STANDARD TYPE

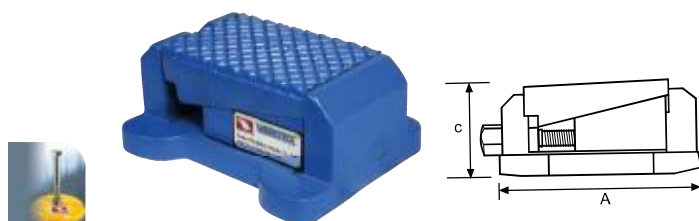


Unit:mm

ORDER NO.	D1	D2	H	Ø dxL	LOAD KGS	Adjustment HEIGH	N.W. KGS	CODE NO.
SB-4	100	90	60	12x50	500	25	2	7001-031
SB-6	150	135	95	16x110	1000	40	5	7001-032
SB-8	200	180	100	20x120	2500	40	8	7001-033
SB-10	250	230	125	24x180	4000	40	12	7001-034

SUITABLE FOR : machine tools, molding machine, printing machine, CNC lathe, grinding machines, drilling machines, milling machines.

HEAVY DUTY TYPE



Unit:mm

ORDER NO.	A	B	C	LOAD KGS	Adjustment HEIGH	N.W. KGS	CODE NO.
SC-1	130	96	66	700	4MM	4	7001-060
SC-2	174	143	80	1500	5MM	8.8	7001-061
SC-3	217	165	101	2500	6MM	16	7001-062

SUITABLE FOR : CNC lathe, milling machines, cutting machines, grinding machines.

LIGHT DUTY TYPE



Unit:mm

ORDER NO.	A	B	C	D	LOAD KGS	CODE NO.
SY-8	M8X1.25P	50	20	40	100	7001-080
SY-12	M12X1.25P	75	30	50	200	7001-081
SY-16	M16X2.0P	100	35	60	300	7001-082

Arbor Press



STANDARD TYPE

All main parts made of ductile cast iron.
Adjustable handle gives convenient handle positioning.
Ram finite control by smooth gears.
4-90 degree equally divided slotted round table.

ORDER NO.	OVERALL HEIGHT	STROKE (mm)	BASE	CENTER TO KNEE	ARBOR PUNCH	WEIGHT (kgs)	CODE NO.
VAR-0	254mm(10")	114	102x240mm	85	19x19x190	8.2	7002-100
VAR-1	304mm(12")	133	127x270mm	95	25x25x228	12.6	7002-101
VAR-2	432mm(17")	215	165x410mm	130	32x32x335	28	7002-102
VAR-3	546mm(21")	317	200x460mm	135	38x38x456	45.3	7002-103
VAR-5	820mm(34")	460	250x670mm	245	45x45x670	140	7002-104

RATCHET LEVERS TYPE



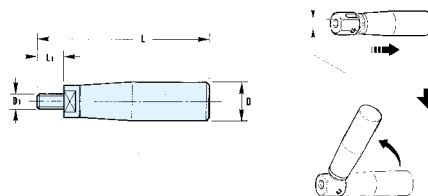
This arbor press with all standard's feature. But operated with a ratchet device that will permit you to use the lever in the most convenient position, the lever has a counterweight for quick return after which the down stroke handwheel will advance the ram to the work quickly.
Ratchet Type Arbor Press available-No. 3/5 only.
The size is same as VAR-3, 5

ORDER NO.	VARR-3	VARR-5
G.W. KGS	65	162
CODE NO.	7002-131	7002-132

Flat End Movable Handle



FE



Flat End Movable Handle

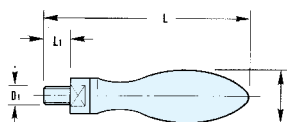
- Handle is foggy plating treated.
- Detachable nut is blackened.
- Fit to common movable handwheel.
- Ready to use.
- Good handing.

ORDER NO.	D ₁	D	L ₁	L	CODE NO.
VFE-10	10x1.5	23	16	100	7003-001
VFE-83	3/8x16	22	16	99	7003-002
VFE-8	8x1.25	19	16	93	7003-003
VFE-165	5/16x18	19	10	78	7003-004
VFE-41	1/4x20	16	11	63	7003-005

Ellipse Movable Handle



EM



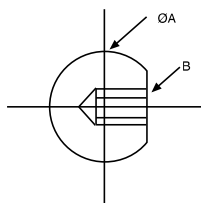
Ellipse Movable Handle

- Brilliant or foggy plating surface.
- Fit to common movable handwheel.
- Easy to install
- Shine and good looking.

ORDER NO.	D ₁	D	L ₁	L	CODE NO.
VEM-12	12x1.75	31	15	122	7003-006
VEM-10	10x1.5	26	13	110	7003-007
VEM-83	3/8x16	25	13	99	7003-008
VEM-8	8x1.25	20	9	80	7003-009
VEM-6	6x1.0	16	7	60	7003-010

Ball Knobs

NEW

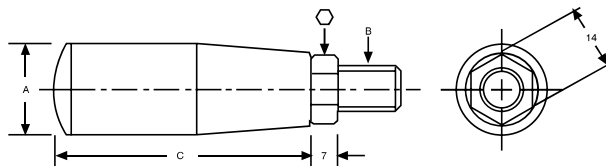


Name	Material	Surfaced process
Knob	Bakelite (KU)	Black

ORDER NO. (KU)	A	B	CODE NO.
VKB-6A	25	M6	7003-120
VKB-8	25	M8	7003-121
VKB-8B	38	M8	7003-123
VKB-10	38	M10	7003-124
VKB-12A	38	M12	7003-127
VKB-12B	42	M12	7003-128

Revolving Handles

NEW VERTEX



Name	Material	Surfaced process
Handle	Bakelite (KU)	Black
Spindle	Steel (ST)	Zincing (ZI)

ORDER NO.	A	B	C	THREAD L	\varnothing	CODE NO.
VRL-8H	20	M8	56	13	14	7003-283A
VRL-8HA	22	M8	76	13	14	7003-284A
VRL-10H	20	M10	56	13	14	7003-285A
VRL-10HA	22	M10	76	13	14	7003-287A
VRL-10HB	25	M10	83	13	14	7003-288A

Hand Knobs

NEW

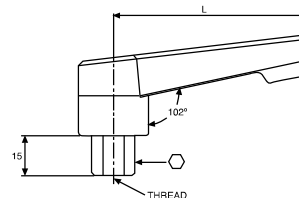


Name	Material	Surfaced process
Knob	(KT)	Black
Spindle	Steel (ST)	Zincing (ZI)

ORDER NO. (KT)	THREAD	KNOB	CODE NO.
VKB-8K	M8x21L	\varnothing 40x65L	7003-133
VKB-8KL	M8x63L	\varnothing 40x65L	7003-134A

Adjustable Hand Levers

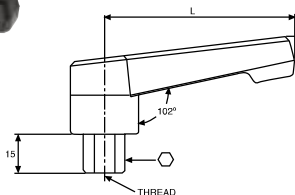
NEW



Name	Material	Surfaced process
Handle	(KT)	Black Knob
Spindle	Steel (ST)	

Adjustable Hand Levers

NEW



Name	Material	Surfaced process
Handle	Plastic (KT)	Black (BK) and black handle (OB)
Spindle	Steel (ST)	

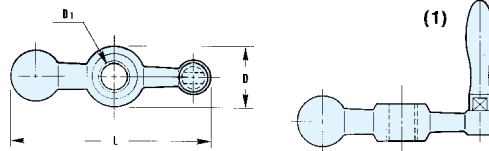
ORDER NO. (KT)	HANDLE L	THREAD	\varnothing	CODE NO.
VAH-6	42	M6	14	7003-214A
VAH-6L	72	M6	14	7003-215A
VAH-8	72	M8	14	7003-216A
VAH-10	92	M10	16	7003-217A
VAH-12	112	M12	16	7003-218A

ORDER NO. (KT)	THREAD L	HANDLE L	CODE NO.
VAH-620	M6x20L	43	7003-220A
VAH-630	M6x30L	43	7003-220B
VAH-640	M6x45L	43	7003-220C
VAH-650	M6x20L	63	7003-220D
VAH-6XL	M6x30L	63	7003-220E
VAH-8D	M8x30L	63	7003-222A
VAH-815	M8x15L	83	7003-222B
VAH-820	M8x20L	83	7003-222C
VAH-840	M8x40L	83	7003-222D
VAH-1020	M10x20L	83	7003-223A

Ball Crank Handle



NEW



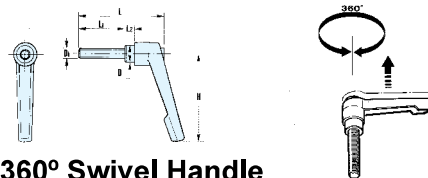
Ball Crank Handle

- Two types of handle end flat or ellipse, for choice.
- Brilliant or foggy plating surface.
- Center hole may be customer specified.

ORDER NO.	D ₁	D	L	CODE NO.
VBK-39	Customer specified	39	190	7003-295
VBK-38		38	128	7003-296
VBK-30		30	95	7003-297
VBK-22		22	88	7003-298
VBK-19		19	79	7003-299

360° Swivelling Lock Handle

NEW



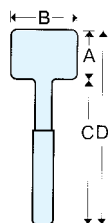
360° Swivel Handle

- When pull out, this handle can swivel 360° free.
- Aluminium handle, all water resistance.
- The handle shape features. curve, ball, square 3 types.

ORDER NO.	D1	D	L1	L2	L	H	CODE NO.
VSA-1	Customer specified	19	Customer specified	Customer specified	55~58	95	7003-300
VSA-2		10			55~58	96	7003-301
VSA-3		10			55~58	45	7003-302
VSB-1		19			55~58	110	7003-303
VSB-2		16			55~58	70	7003-304
VSB-3		10			55~58	50	7003-305
VSD-1		19			55~58	105	7003-306
VSD-2		16			55~58	65	7003-307
VSD-3		10			55~58	45	7003-308

PU-Hammer Series

NEW



BASIC: Steel structure and include steel shot.
 MATERIALS: Main of the anti-pollution PU-liquid.
 The holder use soft quality TPR.
 FEATURE: PU hammer have many colors to choice. PU not make with heavy-metal and dioxin when burning.
 HARDNESS: Hardness of hammer (90A~95A)

mm

ORDER NO.	A	B	C	D	Weight (G)	OZ	CODE NO.
VHM-38	38	100	249	287	520	18oz	7003-367
VHM-46	46	100	260	306	690	24oz	7003-368
VHM-50	50	110	290	340	940	33oz	7003-369
VHM-56	56	120	297	353	1170	41oz	7003-370
VHM-60	60	130	308	368	1400	49oz	7003-371



Universal Drill & Cutter Grinder

ORDER NO.VDG-32N CODE NO.8001-010



VERTEX®



Double cams: The cam of grinding drills & The cam of grinding taps.



FEATURES

- Grinding capacity: $\varnothing 1.5\sim\varnothing 32\text{mm}$ (Straight shank & taper shank) double wheels. It only need to rotate the motor when want to grind the tool of different material. It can increase the safety & save the time for changing & repairing the grinding wheel.
- The kinds of grinding tool include: drills, step drills, taps, lips of end mills, round bars, etc.
- Adopts precision 4" 6 pawl self-centering chuck, clipping one time. It can grind the blade of drills and do the paring of drills abdomen. The angle of drills both sides and the length of the blade are the same after grinding. It can keep the accuracy of the center of drills without off center.

Longitudinal travel of table	120mm
Cross travel of saddle	135mm
Rotary angle of wheel head	360°
Point angle	90°-180°
Size of wheel	125x50x31.75mm
Speed of wheel	3600 RPM
Motor	3/4HP, 110V/220V/380V
N.W. / G.W.	90kgs/120kgs
Size of packing (LxWxH)	800x550x670mm



Horizontal Band Saws

ORDER NO.HBS-7 CODE NO.8001-030



Please notify the voltage & phase when you ordering.

SPECIFICATION

Capacity	● 180mm (7") ■ 180x300mm (7"x12")
Blade size	19x0.9x2360mm (3/4"x0.32x7'9")
Motor	1HP 4pole 50HZ/1430rpm; 60HZ/1720rpm
Blade speed	22, 33, 45, 65mpm (86-132-178-260fpm)
Machine dim	L1470xW430mm (L58"xW17") H990mm (39") horizontal position.
N.W.	130kgs (286LBS)
G.W.	150kgs (341LBS)



Horizontal Band Saws

ORDER NO.HBS-7CE CODE NO.8001-030CE



SPECIFICATION

Capacity	90° ● 180mm ■ 180x280mm ■ 65x300mm 45° ● 110mm ■ 180x110mm
Blade size	19x0.9x2360mm
Motor	1HP 4pole 50HZ/1430rpm; 60HZ/1720rpm
Blade speed	Step pulley 22, 33, 45, 65mpm
Packing Measurement	1295x457x1028mm
N.W. / G.W.	130kgs/150kgs
Type	"CE" Standard



Multi-Purpose Milling & Drilling Machine



ORDER NO.	CODE NO.
MD-30N	8001-020
MD-30B	8001-021

QUALITY FEATURES

- Milling, drilling, tapping boring, reamming.
- Head swivels 360°.
- Zero setting dials.
- Fine downfeed - calibrated.
- Heavy-duty tapered roller bearing spindle.
- 12 speeds.
- Positive spindle lock.
- Adjustable gibs on table.
- Adjustable stops on table.



Face Milling



End Milling



1" Drilling



Tapping

PLEASE NOTIFY THE VOLTAGE & PHASE, WHEN YOU ORDERING. ● Table slot is 16m/m

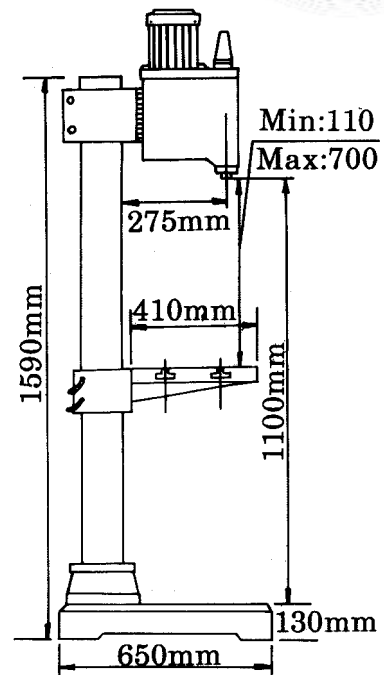
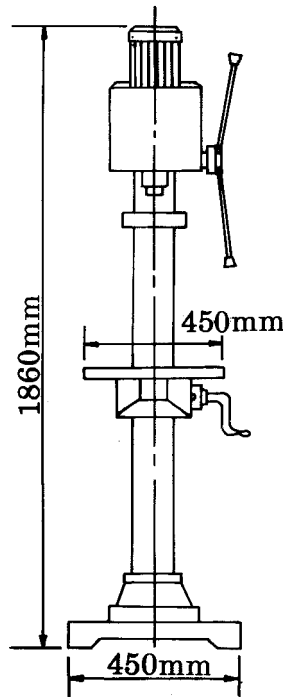
SPECIFICATION

ORDER NO.		MD-3N(PF)	MD-30B(PF)	OPTIONAL ACCESS.
Drilling Capacity		32mm(1-1/4")	32mm(1-1/4")	A. Power down (spindle) feed. B. Power longitudinal (table) feed. C. Tapping switch. D. Forward & reverse switch. E. Magnetic switch. F. Emergency switch. G. Collet chuck. H. Work light. I. Cabinet stand. J. 2 speed motor. K. Extension column. L. Clamping kits 12mm(1/2")
Tapping Capacity		3/4"	3/4"	
Face mill Capacity		76mm(3")	76mm(3")	
End mill Capacity		20mm(3/4")	20mm(3/4")	
Swing		430mm(16-15/16")	405mm(15-7/8")	
Max. distance spindle nose to table		395mm(15-9/16")	480mm(18")	
Spindle taper		MT3,R8	MT3,R8,NT30	
Spindle stroke		110mm(4-5/16")	130mm(5")	
Diameter of Spindle sleeve		62mm(2-7/16")	75(3")	
Head swivel		360°	360°	
Diameter of column		95mm(3-3/4")	115mm(4-1/2")	
Overall height (w/o stand)		980mm(38-9/16")	1100mm(43-1/4")	
Machine stand height		760mm(30")	760mm(30")	
Length		950mm(37-3/8")	1080mm(42-1/2")	
Width		1030mm(40-1/2")	1100mm(43-1/4")	
Motor		3/4HP-1HP	1-1/2HP-2HP	
Spindle speed (r.p.m.)	12S	50Hz	90-2150	100-2080(4 pole)(75-1685 6 pole)
		60Hz	110-2580	120-2500(4 pole)(95-2020 6 pole)
Standard accessories		3" cutter 1/2" chuck 3-1/2" angle vise	3" cutter 1/2" chuck 3-1/2" angle vise	
Forward and backward travel of table		165mm	175mm(7")	
Right and left travel of table		360mm	500mm(19-3/4")	
Working area of table		660mm x 190mm(26"x7-1/2")	730mm x 210mm(28-3/4" x 8-1/4")	
N.W./G.W.		175/205kgs	270/300kgs	
Measurement		20.6Cuft	27.2Cuft	



All Geared Head Drill Press

ORDER NO.GMB-400GS CODE NO.8001-063



FEATURES

- Available for drilling, Tapping etc.
- Gear head can be tilted 90° R & L each.
- Gear head can be swivelled 360°.
- Spindle stroke: 120mm
- Drill capacity: 32mm (steel) 40mm (casting iron).
- Quickly assembled cabinet stand & chip tray, for GEM-400GD (option).
- Available CE standard as fig. show. Electrical control system protecting guard.

SPECIFICATIONS

ORDER NO.		GMB-400GS	ACCESSORIES
DRILL CAPACITY	CASTING	40mm (1-9/16")	STANDARD ACCESSORIES 1. CHUCK ARBOR 2. TOOL & TOOL BOX 3. FORWARD / REVERSE SWITCH OPTIONAL ACCESSORIES 1. 4" SWIVEL VISE 2. 6" SWIVEL VISE 3. 52PCS CLAMPING KITS (M12) 4. 13mm CHUCK 5. CABINET STAND & CHIP TRAY FOR GEM-400GD 6. TWO SPEEDS MOTOR & SWITCH 2P/4P.3PH 7. CE STANDARD (REQUIREMENT AS FIG SHOWN) 8. TAPPING FUNCTION 9. COOLANT SYSTEM 10. 1.5HP ON REQUEST
	STEEL	32mm (1-1/4")	
SPINDLE TAPER		MT#3 OR R-8	
SPINDLE NOSE TO BASE		1100mm	
SPINDLE NOSE TO TABLE		700mm	
COLUMN DIA.		ø115mm	
QUILL DIA.		ø75mm	
QUILL TRAVEL		120mm	
SWING		550mm	
HEAD TILTING		90° R & L	
HEAD SWIVEL		360°	
MAIN MOTOR		0.75PS. 1HP	
SPINDLE SPEEDS	50HZ	50,100,170,370,1250 RPM (4P)	
	60HZ	60,120,200,450,850,1500 RPM (4P)	
TABLE SURFACE		410x450mm	
MACHINE HEIGHT		1860mm	
T-SLOT SIZE		14mm	
N.W. / G.W.		290KGS / 305KGS	
MEASUREMENT		740x540x1955 m/m	
BASE SIZE		450x650 m/m	





Vertical Band Sawing Machine

(Double Dovetail Slidway)



Y-310



Y-360



Y-400



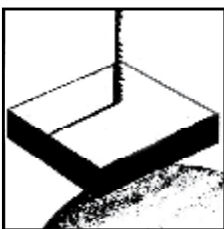
Y-500

Machine features

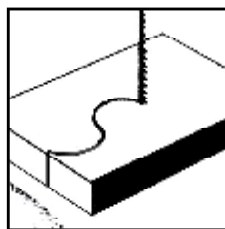
Metal scroll saw is precisely constructed, easy to operate, providing quick and stable sawing. High accuracy performance assures even sawed surfaces, saving much on saw band. With wide processing area and strong sawing power, most of our machine models are suited for iron works and mold - making factories.

ORDER NO.	Y-310	Y-360	Y-400	Y-500
Cutting Capacity	1-160mm	1-190mm	1-295mm	1-320mm
Throat Depth	310mm (12 1/8")	360mm (14 3/16")	400mm (15 3/4")	500mm (19 5/8")
Blade Width	3-13mm	3-16mm	3-16mm	3-19mm
Length of Saw Blade	2370-2490mm	2600-2770mm	3390-3467mm	3922-3992mm
Speed	60-1000 ft/min	60-1200 ft/min	60-1500 ft/min	83-2100 ft/min
Main Motor / Grinder Motor	1HP 1/8HP	1HP 1/8HP	2HP 1/8HP	2HP 1/8HP
Electric Welder	1.2KVA	2.4KVA	2.4KVA	4.2KVA
Table Tilt	R-45° L-15°	R-45° L-15°	R-45° L-15°	R-45° L-15°
Height of Table	880mm	890mm	970mm	980mm
Table Area	398x500mm	398x500mm	500x600mm	550x600mm
Dimension Machine	1530x855x550mm	1630x590x955mm	1825x710x1070mm	1960x740x1200mm
Net Weight (kgs)	210	300	385	495
CODE NO.	8001-070	8001-071	8001-072	8001-073

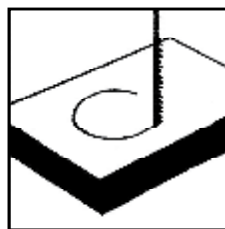
The applications of the band saw



Straight Line cutting



Wavy Line Cutting

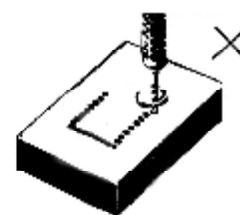


Circular Cutting

Why use methods these?



Slow and difficult to operate



Bad sawing effect

DIY type

ORDER NO. VAG-500

Economic type

ORDER NO. VAG-601A



VAG-500



VAG-601A

- Clean The Air For The Grinder.
- Fixed Type Collet Chuck: Ø3.0mm Is Standard. 3/32" & 1/8" Collet Are Available Upon Your Request. Put Into 10 C.C. From The Air Inlet Hole Twice Daily.
- It's Warm When It's Working.
- Reliable Quality And Economic Price.

ORDER NO.	COLLET SIZE	SPEED	WEIGHT (g)	LENGTH	CODE NO.
VAG-500	3mm, 3/32", 1/8"	54,000 R.P.M.	130	150mm	8001-099

ORDER NO.	COLLET SIZE	SPEED	WEIGHT (g)	LENGTH	CODE NO.
VAG-601A	3mm, 3/32", 1/8"	54,000 R.P.M.	130	150mm	8001-100

Strong & silent type



- Replaceable collet chuck: ø3.0mm is standard. 3/32" and 1/8" collet are available upon your request.
- High-torque, quite-running and well balance.
- Ideal for precision grinding and finishing works.

ORDER NO.	COLLET SIZE	SPEED	WEIGHT (g)	LENGTH	CODE NO.
VAG-701	3mm, 3/32", 1/8"	70,000 R.P.M.	130	150mm	8001-101

Dual-collet type



- Dual collet chuck: ø3.0mm and ø6.0mm are standard. 1/8" and 1/4" collet are available upon your request.
- High torque, heavy-duty, general-purpose applicable on debarring, chamfering, milling and finishing the welded surface etc.

ORDER NO.	COLLET SIZE	SPEED	WEIGHT (g)	LENGTH	CODE NO.
VAG-609	3mm, 6mm	35,000 R.P.M.	350	175mm	8001-115

Angle 45° type



- Angle 45°, suitable for angle debarring and grinding.

ORDER NO.	WHEEL SIZE	SPEED	WEIGHT (g)	LENGTH	CODE NO.
VAG-8241	ø30mm	23,000 R.P.M.	300	160mm	8001-116



Economic type



- Fixed type collet chuck: $\varnothing 6.0\text{mm}$ is standard. 1/4" collet is available upon your request.
- Reliable quality and economic price.

ORDER NO.	COLLET SIZE	SPEED	WEIGHT (g)	LENGTH	CODE NO.
VAG-604	6mm, 1/4"	22,000 R.P.M.	600	175mm	8001-117

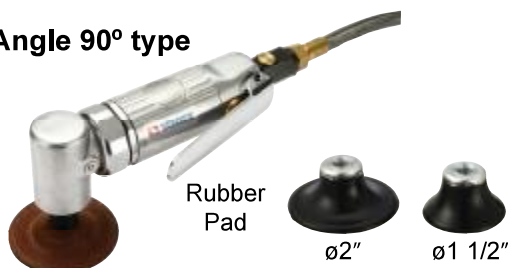
Strong & silent type



- Replaceable collet chuck: $\varnothing 3\text{mm}$ $\varnothing 6\text{mm}$ are standard. 1/4" collet is available upon your request.
- High-torque, quite-running and well balance.
- Ideal for precision grinding and finishing works.

ORDER NO.	COLLET SIZE	SPEED	WEIGHT (g)	LENGTH	CODE NO.
VAG-605	6mm, 1/4"	25,000 R.P.M.	520	150mm	8001-118

Angle 90° type



- $\varnothing 1\ 1/2"$ or $\varnothing 2"$ rubber pad with quick change abrasive are additional options. (extra charge)
- High torque, heavy-duty, general-purpose applicable on deburring, chamfering, milling and finishing the welded surface.
- 2" grinding wheel is standard.

ORDER NO.	PAD SIZE	SPEED	WEIGHT (g)	LENGTH	CODE NO.
VAG-8242	50mm	16,000 R.P.M.	520	175mm	8001-119

4" Angle tool



- Angle 90°, suitable for angle debarring and grinding.

ORDER NO.	WHEEL SIZE	SPEED	WEIGHT (g)	LENGTH	CODE NO.
VAG-932	100mm, (4")	11,000 R.P.M.	1350	175mm	8001-120

Air file



- Also suitable for shoes, molds, and wooden processes.
- Can grind metals. Especial suitable for narrow parts or groove bases & sides.

ORDER NO.	COLLET SIZE	SPEED	Stroke	WEIGHT (g)	LENGTH	CODE NO.
VAG-318	6mm	3,700 cycle/min	9mm	1,000	175mm	8001-121

Finger sander



- It can make possible the speedy and beautiful finishing, so far deemed impossible, of the corners and complicated curves.
- Can provide with not only the smooth and high-speed eccentric rotation movement common to all the finger sanders, but also the easy replacement of the attachments without the need of using any specific tools.

ORDER NO.	SIZE	SPEED	WEIGHT (g)	LENGTH	CODE NO.
VAG-F30	Abrasive: W20mm	13,000 R.P.M.	830	200mm	8001-122

Belt Sander



- For sanding curved surfaces, flat surfaces.
- For removing spot welding, semi & automatic welds, adhesive, paint, and other coating in concave places.

ORDER NO.	SIZE	SPEED	WEIGHT (g)	LENGTH	CODE NO.
VAG-310	10x330mm	16,000 R.P.M.	800	290mm	8001-123

Belt Sander



- For sanding curved surfaces, flat surfaces.
- For removing spot welding, semi & automatic welds, adhesive, paint, and other coating in concave places.

ORDER NO.	BELT SIZE	SPEED	WEIGHT (g)	LENGTH	CODE NO.
VAG-320	20x520mm	16,000 R.P.M.	1100	360mm	8001-124





Abrasive Mounted Point & Wheel For Air Tool



Emery Wheel

- The shank size is $\phi 3.0$
- The wheel size is ϕD
- The minimum quantity is 1000 pcs / each

ABRASIVE MOUNTED POINTS



ORDER NO.	WA-303A	WA-304A	WA-305A
ØD	3mm	4mm	5mm
CODE NO.	8001-131	8001-132	8001-133

ORDER NO.	WA-306A	WA-308A	WA-310A
ØD	6mm	8mm	10mm
CODE NO.	8001-134	8001-135	8001-136

FELT BOBS



ORDER NO.	WF-304	WF-305	WF-306
ØD	4mm	5mm	6mm
CODE NO.	8001-137	8001-138	8001-139

ORDER NO.	WF-308	WF-310	WF-310
ØD	8mm	10mm	12mm
CODE NO.	8001-140	8001-141	8001-142

RUBBERIZE POINTS

120GRIT



ORDER NO.	WR-304	WR-305
ØD	4mm	5mm
CODE NO.	8001-144	8001-145

ORDER NO.	WR-306	WR-308	WR-310
ØD	6mm	8mm	10mm
CODE NO.	8001-146	8001-147	8001-148

RESINOID POINTS

120GRIT



ORDER NO.	WE-303	WE-304	WE-305
ØD	3mm	4mm	5mm
CODE NO.	8001-149	8001-150	8001-151

ORDER NO.	WE-306	WE-308	WE-310
ØD	6mm	8mm	10mm
CODE NO.	8001-152	8001-153	8001-154

RUBBERI PAD

Ø30mm



ORDER NO. WF-30P
CODE NO. 8001-155

PAPER DISC

Ø30mm
GRIT100
150 PCS/BOX
Packed



ORDER NO. WF-30S
CODE NO. 8001-156

CUP WHEEL

Ø30mm
GRIT100
40 PCS/BOX
Packed



ORDER NO. WF-30C
CODE NO. 8001-157



Diamond Tools For Air Tool

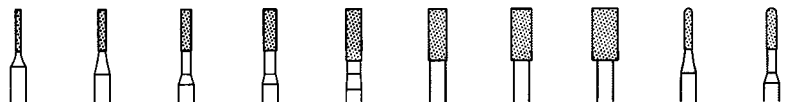
ORDER NO. WG-30D CODE NO. 8001-160

Diamond mounted points(3.0 shank)

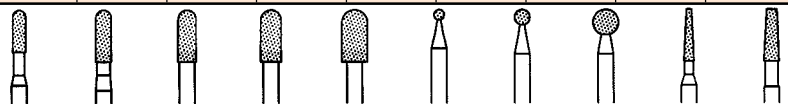


30 PCS ASSORTMENT SET: CONTAINS ONE EACH OF ABOVE POINTS.

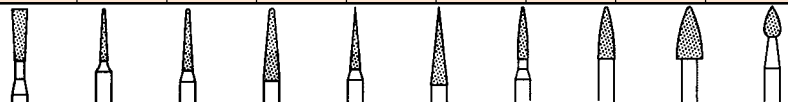
Unit:mm



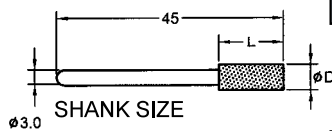
ORDER NO.	10A	15A	20A	25A	30A	35A	40A	50A	15C	20C
ØD	Ø1	Ø1.5	Ø2	Ø2.5	Ø3	Ø3.5	Ø4	Ø5	Ø1.5	Ø2
L	8	8	8	8	10	10	10	10	8	8
CODE NO.	8001-161	8001-162	8001-163	8001-164	8001-165	8001-166	8001-167	8001-168	8001-169	8001-170



ORDER NO.	25C	30C	35C	40C	50C	20B	30B	50B	20T	30T
ØD	Ø2.5	Ø3	Ø3.5	Ø4	Ø5	Ø2	Ø3	Ø5	Ø2	Ø3
L	8	10	10	10	10	-	-	-	10	10
CODE NO.	8001-171	8001-172	8001-173	8001-174	8001-175	8001-176	8001-177	8001-178	8001-179	8001-180



ORDER NO.	30V	15R	20R	30R	20P	30P	20F	30F	50F	30S
ØD	Ø3	Ø1.5	Ø2	Ø3	Ø2	Ø3	Ø2	Ø3	Ø5	Ø3
L	10	10	12	14	12	15	10	10	10	6
CODE NO.	8001-181	8001-182	8001-183	8001-184	8001-185	8001-186	8001-187	8001-188	8001-189	8001-190



WG-30D: 30 PCS / set
(set in $\phi 3.0$ mm shank)

WG-30D-I: 30 PCS / set
(set in $\phi 1/8$ " shank)

Grit size:
 $\phi 2.0 \sim \phi 5.0$ is 120#
 $\phi 1.0 \sim \phi 1.5$ is 150#,
one set including all
point each one,
total is 30 pcs/set



Magnetic De-Burring & Polishing Machine



Features:

- It is the special Grinder for de-burr, polish and clean light and precision spare parts of watch, computer, electron, machinery...etc, such as material of steel, stainless steel, brass, copper, aluminum, hard-plastic., and jewelry of gold, k-gold, platinum, silver...etc.
- Fine finish for delicate articles and perfect result. Never hurt the face, change the form, change the accuracy or loss the weight of articles after ground.
- Can be de-burr the hole, crevice of articles. Resolved the problems as you met before.



Applications:

- Designed for small quantity of parts.
- Table type model, safe and convenient.
- Suitable for deburring and polishing brass, copper, aluminum, gold, silver...etc soft material.

Operation Plate:

- Power
- 60 minute timer



ORDER NO.	DIMENSION	TANK SIZE	POWER	STANDARD ACCESSORIES	N.W.	CODE NO.
VDB-716	L x W x H 270x225x295 (mm)	L x W 160x160 (mm)	220/110 VAC (50Hz/60Hz) 2A single phase	1.Rotariar. 2.Containers. 3.Separating container. 4.Magnetic sleeve. 5.Stainless pins/1kg 6.Grinding liquid/1 Liter 7.Operation manual.	16kgs	8001-201



Applications:

- Designed for medium quantity of parts.
- Fully automatic. One person can run multiple machines.
- Suitable for non-magnetic metal parts.

Operation Plate:

- Power
- Start
- Stop
- Counterclockwise timer
- Clockwise timer
- Monitor of finished cycle and error direction
- Speed adjustment



ORDER NO.	DIMENSION	TANK SIZE	POWER	STANDARD ACCESSORIES	N.W.	CODE NO.
VDB-728	L x W x H 400x490x900 (mm)	L x W 280x280 (mm)	220 VAC (50Hz/60Hz) 5A single phase	1.Rotariar. 2.Containers. 3.Separating container. 4.Magnetic sleeve. 5.Stainless pins/2kg 6.Grinding liquid/2 Liter 7.Operation manual.	65kgs	8001-202



Applications:

- Designed for large quantity of parts.
- Fully automatic. One person can run multiple machines.
- Suitable for all types of metal parts.

Operation Plate:

- Power
- Start
- Stop
- Counterclockwise timer
- Clockwise timer
- Monitor of finished cycle and error direction
- Speed adjustment
- Finished cycle alarm
- Finished cycle light



ORDER NO.	DIMENSION	TANK SIZE	GRIND ABILITY	POWER	STANDARD ACCESSORIES	N.W.	CODE NO.
VDB-735	L x W x H 640x625x865 (mm)	L x W 420x380 (mm)	65 CM	220 VAC (50Hz/60Hz) 10A single phase	1.Rotariar. 2.Containers. 3.Separating container. 4.Magnetic sleeve. 5.Stainless pins/4kg 6.Grinding liquid/4 Liter 7.Operation manual.	100kgs	8001-203



Magnetic De-Burring & Polishing Machine

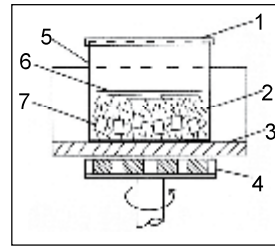
ORDER NO.VDB-233A CODE NO.8001-300



Diagram of principle for Magnetic De-burring & Polishing Machine

- Lid
- Magnetic media (stainless pin)
- Top plate
- Magnetic disc
- Container
- liquid and water level (1/ 100)
- Work-piece

work-piece are tumbled together with the magnetic media through the rotation of the magnets below the non-magnetic top plate, which causes violent agitation of the magnetic field.



Function of liquid:

For avert rustiness, cool and clean.

Rate of liquid/water: 1/100

GRINDING LIQUID	
Material	Stainless, steel Brass, copper Gold, silver platinum



Magnetic media / Grinding liquid (Stainless pin)



SS304 STAINLESS PIN

SPECIFICATION OF MAGNETIC MEDIA (STAINLESS PIN)						
Dmm x Lmm	0.2x5	0.3x5	0.5x5	0.7x5	1.0x5	1.2x5

OPERATIONS

- Put the magnetic media (stainless steel pins) in the container, the quantity of magnetic media is around 0.5cm to 1cm from the bottom of the container.
- Put work-Piece in the container, the principle of quantity as does not put the work-piece overlap.
- Put the liquid with 100 times of water in the container. The liquid with water should be cover the workpiece and over 2--3cm.
- Placed the lid of container and put the container on the top plate of the grinder for begin to grind.
- The grinding time and the quantity of work-piece should be depend on the result which you need after test several times. Please make note for next time when you want to grind same work-piece.
- There are two size of container, so if you want to grind the work-piece just few quantity, the small one will be much better.

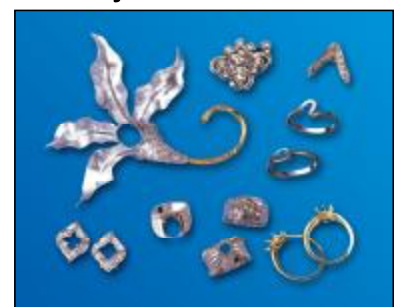
EXAMPLE



parts



Jewelry



Precision Drill Grinder

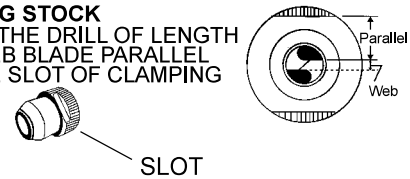


NEW



For Drill Re-sharpening
Precision, Efficient, Easy operation, Reasonable price,
Short processing time, Grinding Angle
90-140 Degree, Grinding Diameter from 2-13 mm.
Reasonable Price, Fast & easy operation

CHECKING STOCK
 FOR SET THE DRILL OF LENGTH
 & THE WEB BLADE PARALLEL
 WITH THE SLOT OF CLAMPING
 HOLDER.



1. High Efficiency, High Quality Grinding Lip, Good Grinding Results
 2. Quality Assurance: $\pm 0.05\text{mm}$
 3. Considerable Design, Invisible Tool Box, Delicate & Friendly Use
 4. Peerless, Super Function, Durable, strong Motor can work for 2 hours.
 5. Normal drill, center drill, carbide NC spot drill could be resharpened.
- Suit for the drill process on steel, casting iron, brass and aluminum.

ORDER NO.	VDG-13A	VDG-20	VDG-25
DRILL DIAMETER	$\varnothing 2.0 \sim \varnothing 13.0$	$\varnothing 8 \sim \varnothing 20$	$\varnothing 12 \sim \varnothing 25$
CENTER POINT ANGLE	$90^\circ \sim 140^\circ$	$90^\circ \sim 140^\circ$	$100^\circ \sim 136^\circ$
POWER SUPPLY	AC-110 or 220 1PH	AC-110 or 220 1PH	AC-110 or 220 1PH
R.P.M. OF MOTOR	5100 R.P.M.	3280 R.P.M.	5300 R.P.M.
GRIND WHEEL	CBN #200	CBN #230	CBN #200
NET WEIGHT	AC-110: 9.8kgs AC-220: 9.8kgs	AC-110: 19.8kgs AC-220: 19.8kgs	AC-110: 23.8kgs AC-220: 23.8kgs
OVERALL DIMENSIONS	W282xD185xH110 m/m	W360xD215xH180 m/m	W380xD240xH200 m/m
STANDARD ACCESSORIES	ALLOY STEEL COLLET ER-20 COLLETx11PCS $\varnothing 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13$, EACH ONE COLLET HOLDER X 1 UNIT 4mm HEXAGON WRENCH X 1 PCS FOR CHANGE WHEEL	ALLOY STEEL COLLET ER-32 COLLETx13PCS $\varnothing 8, 9, 10, 12, 13, 14, 15, 16, 17, 18, 19, 20$, EACH ONE COLLET HOLDER X 1 UNIT 5mm HEXAGON WRENCH X 1 PCS SPACER 0.1mm x 2pcs, 3.0mm x 1pcs FOR CHANGE WHEEL	ALLOY STEEL COLLET ER-40 COLLETx14PCS $\varnothing 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25$, EACH ONE COLLET HOLDER X 1 UNIT 4mm HEXAGON WRENCH X 1 PCS FOR CHANGE WHEEL
CODE NO.	8001-012	8001-013	8001-014

GRIND WHEEL

ORDER NO.	FOR DRILL MATERIAL	WHEEL	CODE NO.
VDG-13B	HSS	CBN200	8001-500
VDG-13D	CARBIDE	SDC200	8001-501
VDG-20B	HSS	CBN200	8001-502
VDG-20D	CARBIDE	SDC200	8001-503
VDG-25B	HSS	CBN200	8001-504
VDG-25D	CARBIDE	SDC200	8001-505

OPTIONAL COLLET SPECIALSIZE	ER-20	ER-40 FOR SPECIAL SIZE
	$\varnothing 3.5, 4.5, 5.5, 6.5, 7.5, 8.5, 9.5, 10.5, 11.5, 12.5$	$\varnothing 8, 9, 10, 11, 26, 27, 28, 29, 30$

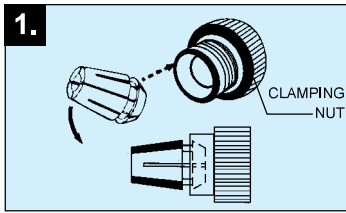


VDG-25

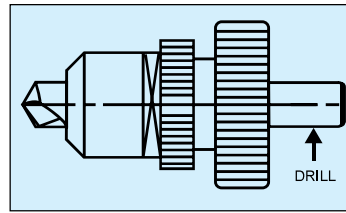
● VDG-25 allows up to size $\varnothing 8 \sim \varnothing 30\text{mm}$, please choose optional collet $\varnothing 8, 9, 10, 11, 26, 27, 28, 29, 30\text{mm}$.

G15 SPECIAL USAGE MACHINE

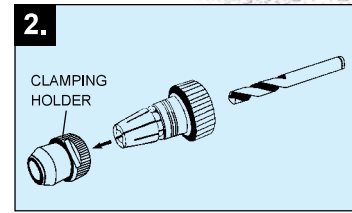
A. HOW TO USE HOLDER UNIT FOR COLLET & DRILL



Please confirm the drill size and pick up proper collet. Assemble collet into clamping nut by 45 degree. (Before insert the drill into the clamping holder.)

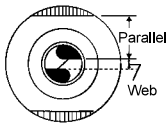
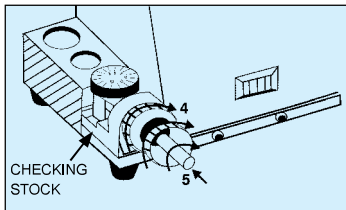


HOLDER UNIT



Insert the drill, lock the clamping holder but not tightened, allow the drill can still move.

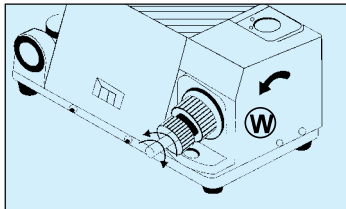
B. HOW TO SET THE HOLDER UNIT AT THE CHECKING STOCK



1. Find the drill diameter. (If the drill D. is 8.2mm) Set the indicator of scale No. as same as drill's diameter. (Please turn the indicator plate and set it between 8mm-8.5mm).
2. Insert the holder unit into the checking stock, The slot of clamping unit will match into the PIN of checking stock. (Make sure the drill is touching the checking stock.)
3. Turn the holder unit and drill to clockwise (Make sure the drill is touching the checking stock). And tighten the holder unit by turning the clamping nut.

- CAUTION**
1. Make sure the web blade of drill is parallel to the slot of clamping holder.
 2. If a drill's length is less than 10mm, please add 1-2 scale onto the indicator plate.
 3. If a drill's web blade is vary from normal drill, please check the parallel to slot of the clamping holder first, and then set the indicator.

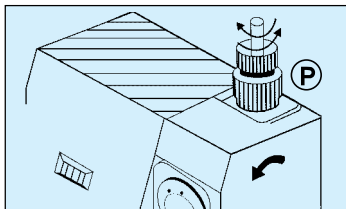
C. HOW TO GRIND THE WEB OF DRILL



1. Turn on the power.
2. Insert the holder unit into the (W) grind stock. The slot will match with the PIN. Let the drill reach diamond wheel smoothly. (Hold the clamping holder when turning.)
3. Grinding the drill by moving right and left. Until the grinding noise is gone.
4. Take out the holder unit. And turn 180°, Insert again like step 3. complete the web sharpening process.

- CAUTION**
1. Hold and turn the clamping holder to avoid mis-grinding. Hold drill or clamping nut when turning may result in un-even surface.
 2. To grind different angle shall adjust angle indicator before insert.

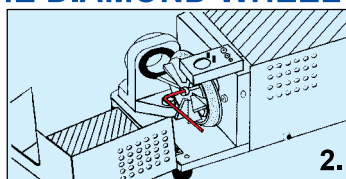
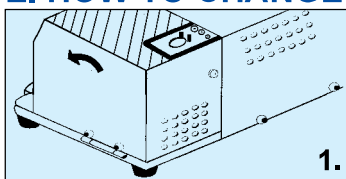
D. HOW TO GRIND CENTER POINT OF DRILL



1. Insert the holder unit into (P) grind stock slot and match with the PIN.
2. Turn the holder unit right and left slowly until the grind noise is off.
3. Take out the holder unit and turn opposite 180° and repeat step 2.

NOTE: Drill under 4 mm no need to grind center point.

E. HOW TO CHANGE THE DIAMOND WHEEL



1. Loosen the screw on the wheel cover.
2. Open the cover and loosen the screw which use to lock the grind wheel.
3. Change the wheel, make sure two screws are in place and fixed.

CAUTION Do not plug in the power before the wheel cover is closed.

Left Hand Drill Grinder

ORDER NO.VDG-13L CODE NO.8001-050



NEW

GRINDER STOCK FOR DRILL CENTER POINT

CE SWITCH



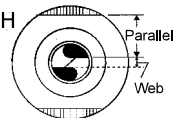
INDICATOR THE NUMBER FOR DRILL DIAMETER

GRINDER STOCK FOR DRILL WEB

ANGLE INDICATOR 90°~140° FOR CENTER POINT ANGLE

COLLET SHEATH

CHECKING STOCK FOR SET THE DRILL OF LENGTH & THE WEB BLADE PARALLEL WITH THE SLOT OF CLAMPING HOLDER.



SLOT

For Drill Re-sharpening

Precision, Efficient, Easy operation, Reasonable price, Short processing time, Grinding Angle

90-140 Degree, Grinding Diameter from 2-13 mm.

Reasonable Price, Fast & easy operation

1. High Efficiency, High Quality Grinding Lip, Good Grinding Results
2. Quality Assurance: $\pm 0.05\text{mm}$
3. Considerable Design, Invisible Tool Box, Delicate & Friendly Use
4. Peerless, Super Function, Durable, strong Motor can work for 2 hours.
5. Normal drill, center drill, carbide NC spot drill could be resharpene.

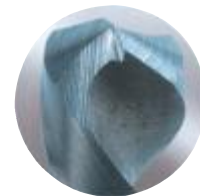
Suit for the drill processs on steel, casting iron, brass and aluminum.

For 2mm-13mm Left Hand Twist Drill

Re-sharpening, Angle 118°~135°

ORDER NO.	VDG-13L
Drill Diameter	$\varnothing 2 \sim \varnothing 13$
Point Angle	118°~135°
Power Supply	AC110V 50/60Hz, AC220V(Opt.)
R.P.M. of motor	5300 R.P.M.
Grinding Wheel	CBN #200
Weight	N.W.:8kg G.W.:9kg
Machine Size	L:286mm W:133mm H:155mm
Packing Size	L:330mm W:205mm H:225mm
Standard Accessories	ER-20 Collet x 12 pcs Collet Holder x 1 set Metal Shim 0.1mm x 2 pcs / 0.3mm x 1 pcs Hexagon Wrench 3mm x 1 pcs / 4mm x 1 pcs
CODE NO.	8001-050

Optional SD Grinding Wheel for Carbide Drills



Left hand twist drill bits

Sheet Metal Drill Grinder

ORDER NO. VDG-13S CODE NO. 8001-051



NEW



High Quality Grinding Wheel

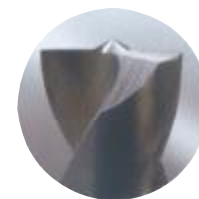
Please choose the suitable grinding wheel for different drill diameter

1. Ø3.0mm~Ø5.9mm Please Use A Grinding Wheel (CBN)
 2. Ø6.0mm~Ø8.9mm Please Use B Grinding Wheel (CBN)
 3. Ø9.0mm~Ø13.0mm Please Use C Grinding Wheel (CBN)
- Optional: SDC grinding wheel is available for carbide drills.



For 3mm-13mm Sheet Metal Drill Re-sharpening, Angle 165°~180°

Special Design For Grinding Sheet Metal Drills



Sheet metal drill bits

ORDER NO.	VDG-13S
Drill Diameter	Ø3~Ø13
Point Angle	165°~180°
Power Supply	AC110V 50/60Hz, AC220V(Opt.)
R.P.M. of motor	5300 R.P.M.
Grinding Wheel	CBN #200
Weight	N.W.:8.5kg G.W.:9.5kg
Machine Size	L:286mm W:133mm H:155mm
Packing Size	L:330mm W:205mm H:225mm
Type of Thinning	Thinning
Standard Accessories	ER-20 Collet x 11 pcs Collet Holder x 1 set Metal Shim 0.1mm x 2 pcs / 0.3mm x 1 pcs Hexagon Wrench 3mm x 1 pcs / 4mm x 1 pcs
CODE NO.	8001-051

Optional SD Grinding Wheel for Carbide Drills

GRIND WHEEL

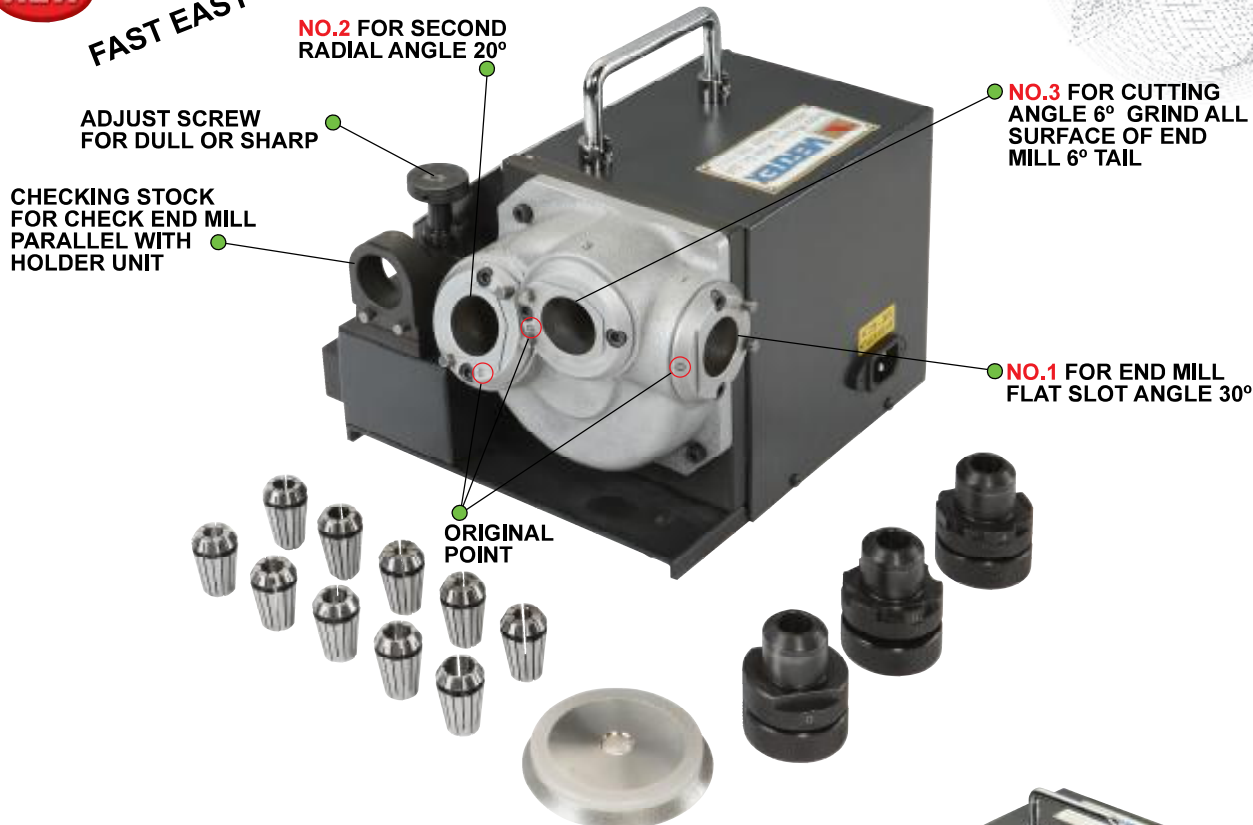
ORDER NO.	Grind Wheel	CODE NO.
VDG-13S-A	CBN OR SDC Ø3.0~Ø5.9mm	8001-056
VDG-13S-B	CBN OR SDC Ø6.0~Ø8.9mm	8001-057
VDG-13S-C	CBN OR SDC Ø9.0~Ø13mm	8001-058

Precision End Mill Grinder



NEW

FAST EASY

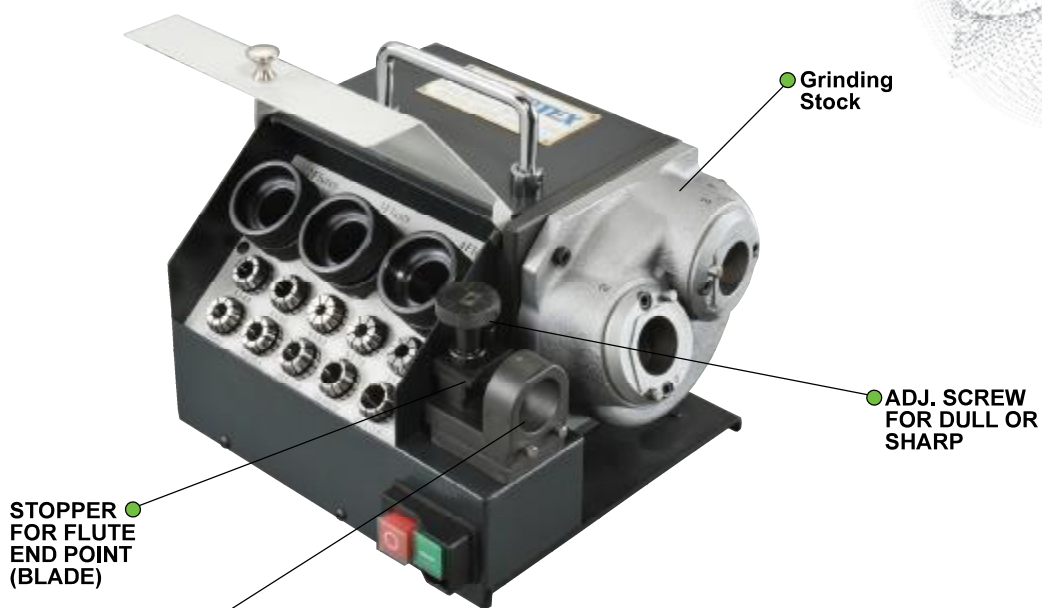


For End Mill Re-sharpening, 2, 3, 4 Number Flute Precision, Efficient, Easy operation, Reasonable price, Short processing time, Grinding Diameter from 4-13 mm. Reasonable Price, Fast

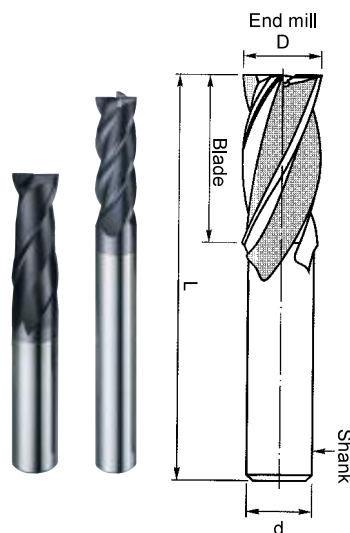
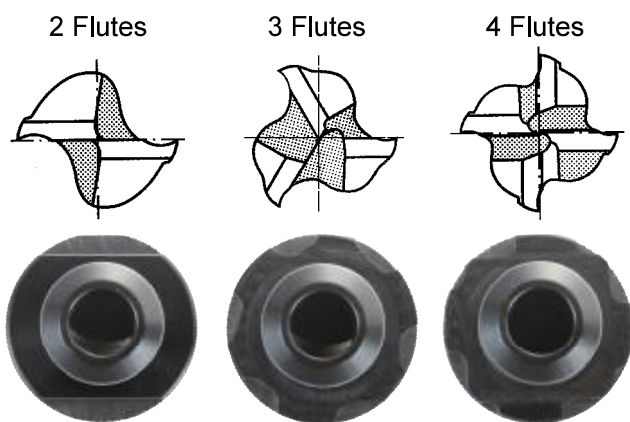
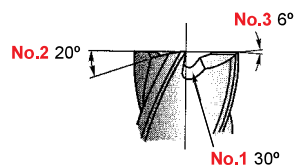
1. High Efficiency, High Quality Grinding Slip, Good Grinding Results
2. Quality Assurance: $\pm 0.02\text{mm}$
3. Easy Operation, For Urgent Need, Low cost, Save Money



ORDER NO.	VEG-13A	VEG-25A
CAPACITY END MILL DIA.	$\phi 4 \sim \phi 13\text{mm}$	$\phi 12 \sim \phi 25\text{mm}$
MOTOR	450W	1000W
SPEED	6000rpm	4300rpm
POWER	AC-110 or 220 1PH 50/60HZ	AC-110 or 220 1PH 50/60HZ
AXIAL-ANGLE	NO.1 END MILL FLAT SLOT ANGLE 30° NO.2 SECOND RADIAL ANGLE 20° NO.3 CUTTING ANGLE 6°	NO.1 END MILL FLAT SLOT ANGLE 30° NO.2 SECOND RADIAL ANGLE 20° NO.3 CUTTING ANGLE 6°
STANDARD ACCSSORIES	ALLOY STEEL COLLET ER-20 COLLET: $\phi 4, 5, 6, 7, 8, 9, 10, 11, 12, 13\text{mm}$ 10 pcs/set WRENCH:1PC SDC 270 x1 For $\phi 4 \sim \phi 6\text{mm}$ SDC 270 x1 For $\phi 8 \sim \phi 13\text{mm}$ Square Type For 4 Flutes End Mill x 1 Set Hex. Type For 3 Flutes End Mill x 1 Set Parallel Type For 2 Flutes End Mill x 1 Set	ALLOY STEEL COLLET ER-40 COLLET: $\phi 12, 16, 18, 20, 22, 25\text{mm}$ 6 pcs/set WRENCH:1PC SDC 150 x1 For $\phi 12 \sim \phi 25\text{mm}$ Square Type For 4 Flutes End Mill x 1 Set Hex. Type For 3 Flutes End Mill x 1 Set Parallel Type For 2 Flutes End Mill x 1 Set
PACKING SIZE	320x260x300mm	365x293x345mm
WEIGHT (kg)	17	31
CODE NO.	8001-510A	8001-520A



CHECKING STOCK FOR CHECK END MILL PARALLEL WITH HOLDER UNIT



Optional Accessories

※ Each holder unit has mark 2, 3 and 4 on it.

ORDER NO.	Grind Wheel	FOR END MILL MATERIAL	CODE NO.
VEG-13BS	CBN 270 x1 For $\phi 4 \sim \phi 6 \text{mm}$	H.S.S.	8001-511
VEG-13BL	CBN 270 x1 For $\phi 8 \sim \phi 13 \text{mm}$	H.S.S.	8001-512
VEG-13DS	SDC 270 x1 For $\phi 4 \sim \phi 6 \text{mm}$	CARBIDE	8001-514
VEG-13DL	SDC 270 x1 For $\phi 8 \sim \phi 13 \text{mm}$	CARBIDE	8001-515
VEG-25BS	CBN 150 x1 For $\phi 12 \sim \phi 25 \text{mm}$	H.S.S.	8001-516
VEG-25DS	SDC 150 x1 For $\phi 12 \sim \phi 25 \text{mm}$	CARBIDE	8001-517



NEW

FAST EASY

NO.2 FOR SECOND RADIAL ANGLE 20°

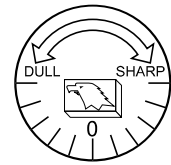
ADJUST SCREW FOR DULL OR SHARP

CHECKING STOCK FOR CHECK END MILL PARALLEL WITH HOLDER UNIT

NO.3 FOR CUTTING ANGLE 6° GRIND ALL SURFACE OF END MILL 6° TAIL

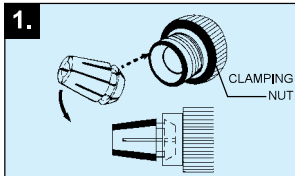
NO.1 FOR END MILL FLAT SLOT ANGLE 30°

ORIGINAL POINT

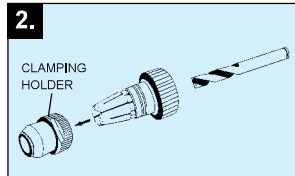


You can adjust the sharpness on the round plate, move toward dull and sharp mark.

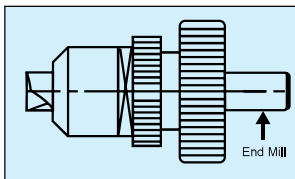
A. HOW TO INSTALL HOLDER UNIT FOR END MILL



Please confirm the end mill size and pick up proper collet. Assemble collet into clamping nut by 45 degree. (Before insert the end mill into the clamping holder.)



Insert the end mill, lock the clamping holder but not tightened, allow the end mill can still move. Insert the end mill, let the end mill blade length 35mm out, (don't tightened the clamping Holder)



HOLDER UNIT



Stopper for flute end point (blade)





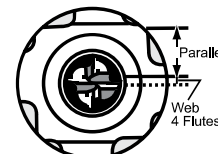
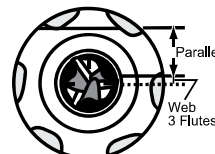
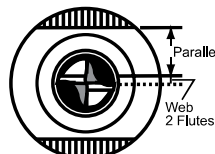
B. HOW TO SET THE HOLDER UNIT AT THE CHECKING STOCK

(For length and angle setting)



Original Point

- 1) Please make sure the blade of the end mill set in the position like we show below. Hold the end mill but not tight up. Always use 0 to check!
 ※ You can adjust the sharpeness on the round plate, move toward dull and sharp mark.
 - 2) Aim at 0 mark and insert holder unit into checking stock. Turn clockwise a little bit, make sure the blade is touch the stock, lock the holder now.
 ※ When take out the holder unit, please turn the round plate counter clockwise so you can take out smoothly.
- CAUTION** 1 Make sure the web blade of drill is parallel to the slot of clamping holder.
 2 When the end mill blade is broken, the first grind job please turn to the dull sidie. And grind 2 times in order to get perfect result.

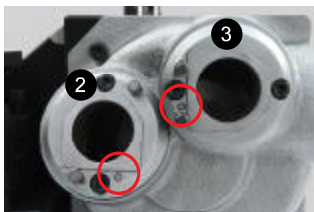


C. HOW TO GRIND NO1. END MILL FLUTE SLOT ANGLE 30°



- 1) Aim the original point at hole on No1. to grind end mill Flute Slot Angle 30°
 - 2) Insert the holder and touch against the No1. surface, until the grind noise is off.
 ※ Always begin with 0.
 ※ While grinding, please turn holder unit right and left a little, against pins.
 - 3) (2 Flutes) Please insert and take out turn 180° and repeat step 1~2;
 (3 Flutes) Please insert and take out turn 120° and repeat step 1~2, two times;
 (4 Flutes) Please insert and take out turn 90° and repeat step 1~2, three times.
- ※ While grinding, holder unit shall touch / match most of the grinding and move smoothly.
 ※ Each holder will match each hole's pin, smake design.

D. HOW TO GRIND END MILL'S NO2. SECOND RIDIAL ANGLE 20° BACK ANGLE



- 1) Insert the Holder unit and aim the original point, touch the No2's surface until the grinding noise is off.
 ※ Always begin with 0.
 ※ While grinding, please turn holder unit right and left a little, against pins.
- 2) (2 Flutes) Please insert and take out turn 180° and repeat step 1~2;
 (3 Flutes) Please insert and take out turn 120° and repeat step 1~2, two times;
 (4 Flutes) Please insert and take out turn 90° and repeat step 1~2, three times.

E. HOW TO GRIND END MILL NO3. CUTTING ANGLE 6°



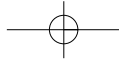
- 1) Place holder unit and aim at hole NO.3, touch the NO.3's surface until the grinding noise is off.
 ※ Always begin with 0.
 ※ While grinding, please turn holder unit right and left a little, against pins.
- 2) (2 Flutes) Please insert and take out turn 180° and repeat step 1~2;
 (3 Flutes) Please insert and take out turn 120° and repeat step 1~2, two times;
 (4 Flutes) Please insert and take out turn 90° and repeat step 1~2, three times.

F. HOW TO CHANGE GRIND WHEEL



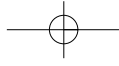
- 1 Use 4mm Hex. Wrench, take out 3 screws of grinding stock, remove the grinding stock.
 - 2 Take out the locking screw of the grind wheel and remove the grind wheel.
 - 3 Replace the old one with a new grind wheel.
 - 4 Lock back the screw, install the grinding stock and lock 3 screws.
- ※ When grind $\varnothing 4\sim 6\text{mm}$ please use correct diamond wheel.
 $\varnothing 6\sim 13\text{mm}$

CAUTION: When open, please un-plug the power core.



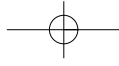
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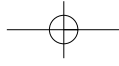
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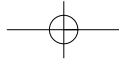
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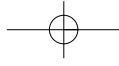
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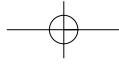
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