

Universal Head / Milling Spindle (Built in, Direct, Belt, Gear Type) /
Turning Spindle / Grinding Spindle

HIGH PRECISION SPINDLE



KASWIN

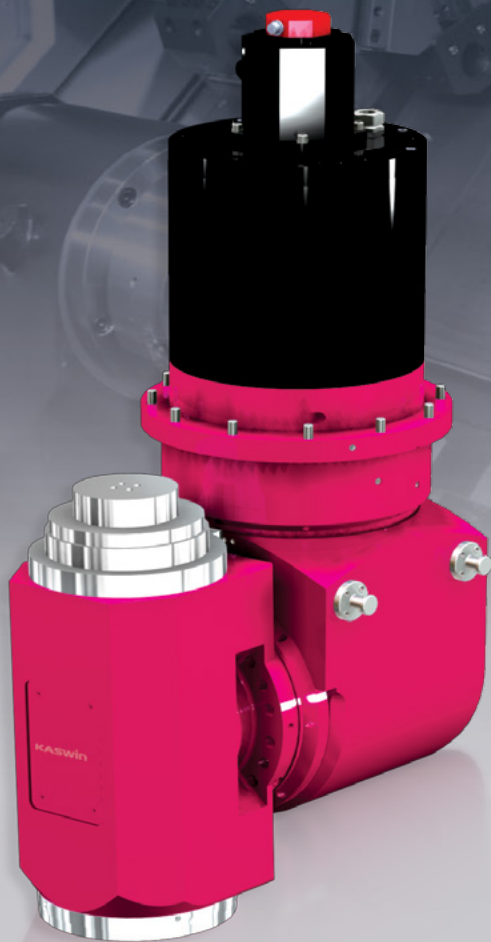
High Precision Spindle

Universal Head

KSU-AC5

지속적인 기술 개발과 축적을 통해 발전하는 카스윈입니다.

KASWIN! We are developed by continued technology development and accumulation.



Dual Axis Precision Automatic Indexing Milling Head Spec.

COMMON SPEC.

TOOL SPEC	BT50
SPINDLE POWER	18.5/22kW
SPINDLE TORQUE	MAX. 118Nm
MAX.SPEED	12,000rpm
BRG. LUBRICATION	GREASE
FRONT BEARING	Ø90
REAR BEARING	Ø60
TOOL CLAMPING FORCE	2,000kg
COOLING	OIL JACKET COOLING
HY'D PRESSURE	60bar
AIR PRESSURE	5bar
ENCODER SYSTEM	ABSOLUTE
AXIS DRIVEN MOTOR	FANUC B8/3000is
WEIGHT	ABOUT : 450kg

	A-AXIS	C-AXIS
DIVISION ANGLE	5°	5°
DIVISION ACCURACY	±3"	±3"
CLAMPING FORCE	6,400kg	12,000kg
SWIVELING ANGLE	±110°	±200°
SWIVELING TIME	0.7sec/5°, 3.3sec/180°	0.7sec/5°, 3.3sec/180°

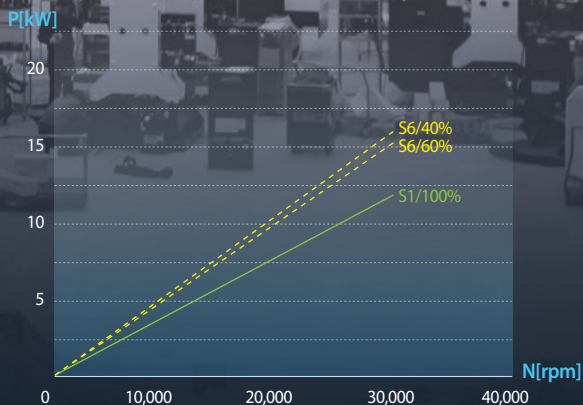
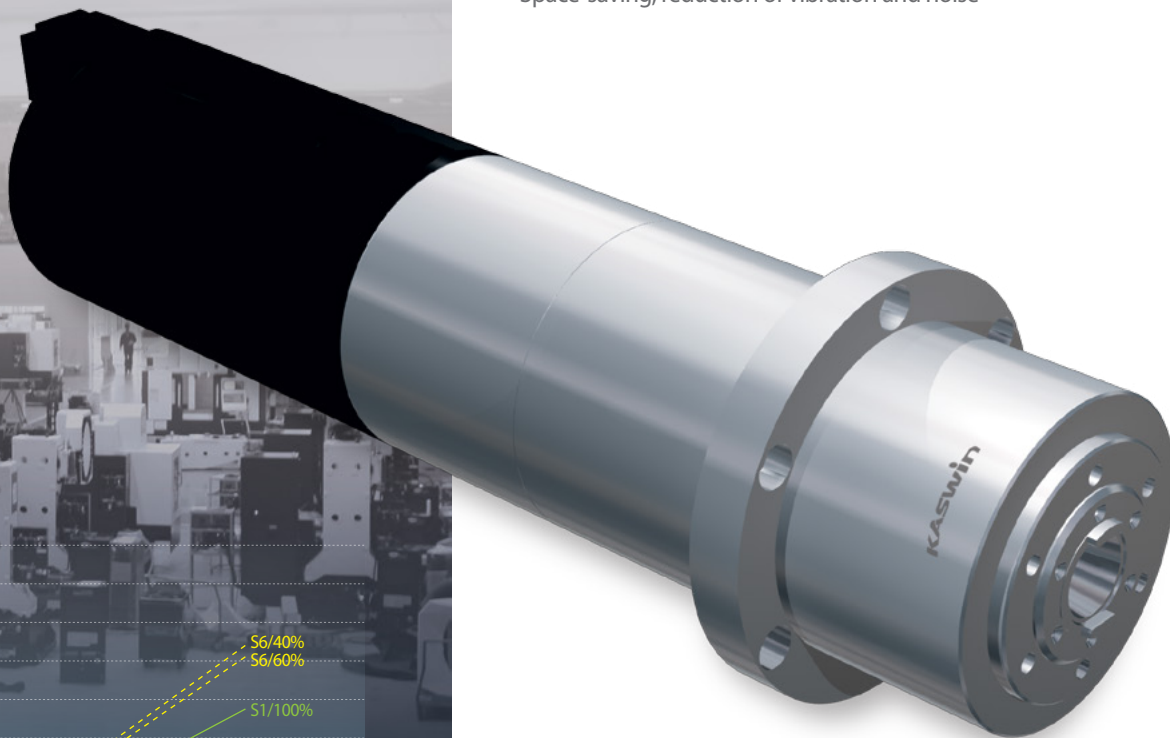
Milling Spindle Built in Type

High Precision Spindle

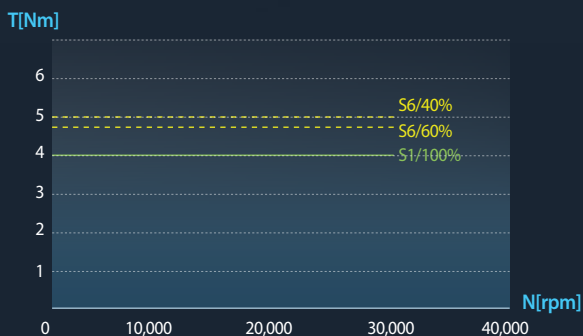
KSB-A1354

공간절약, 진동 및 소음 감소

Space-saving, reduction of vibration and noise



Motor Speed



Motor Speed

Specification

ITEMS	KSB-1354A
HOUSING OUT DIAMETER(mm)	130
WORKING POSITION	VERTICAL
MAX SPEED(rpm)	30,000
MAX POWER(kW)	15.5(S6-40%)/14.5(S6-60%)/12(S1-100%)
MAX TORQUE(Nm)	5(S6-40%)/4.7(S6-60%)/3.9(S1-100%)
TOOL INTERFACE	BBT30
CLAMPING FORCE(N)	4,500
BEARING LUBRICATION	OIL & AIR
BEARING	Ø45
WEIGHT(kg)	50

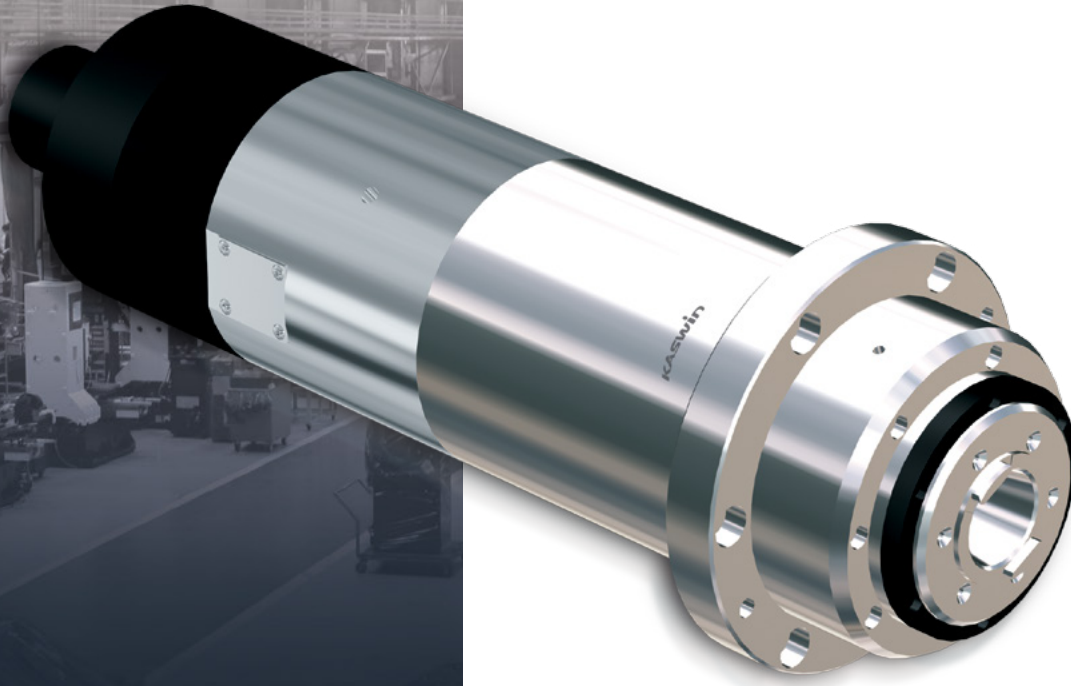
Milling Spindle Built in Type

High Precision Spindle

KSB - E1145

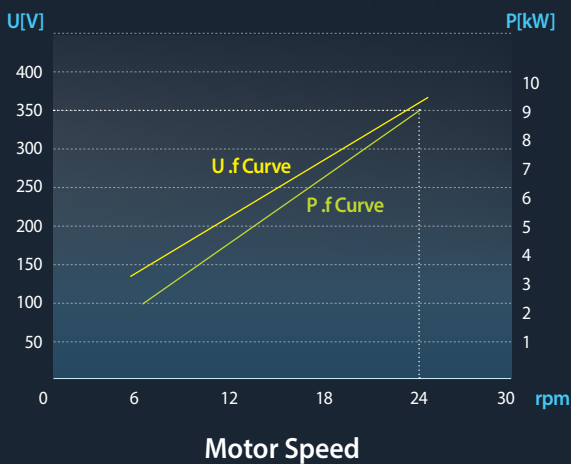
공간절약, 진동 및 소음 감소

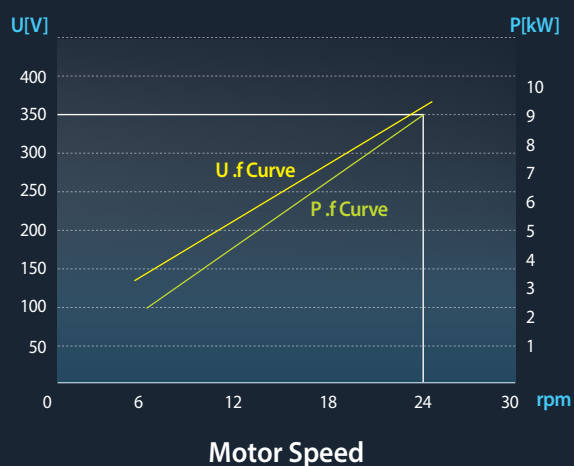
Space-saving, reduction of vibration and noise



Specification

ITEMS	KSB-E1145
HOUSING OUT DIAMETER(mm)	110
WORKING POSITION	HORIZONTAL & VERTICAL
MAX SPEED(rpm)	24,000
MAX POWER(kW)	9
MAX TORQUE(Nm)	3.5
TOOL INTERFACE	BBT30
CLAMPING FORCE(N)	4,500
BEARING LUBRICATION	GREASE
BEARING	Ø45 / Ø40
WEIGHT(kg)	25





ITEMS	KSB-E1239
HOUSING OUT DIAMETER(mm)	120
WORKING POSITION	HORIZONTAL & VERTICAL
MAX SPEED(rpm)	24,000
MAX POWER(kW)	9
MAX TORQUE(Nm)	3.5
TOOL INTERFACE	BBT30
CLAMPING FORCE(N)	4,500
BEARING LUBRICATION	GREASE
BEARING	Ø45 / Ø40
WEIGHT(kg)	25

High Precision Spindle

KSB - E1239

공간절약, 진동 및 소음 감소

Space-saving, reduction of vibration and noise



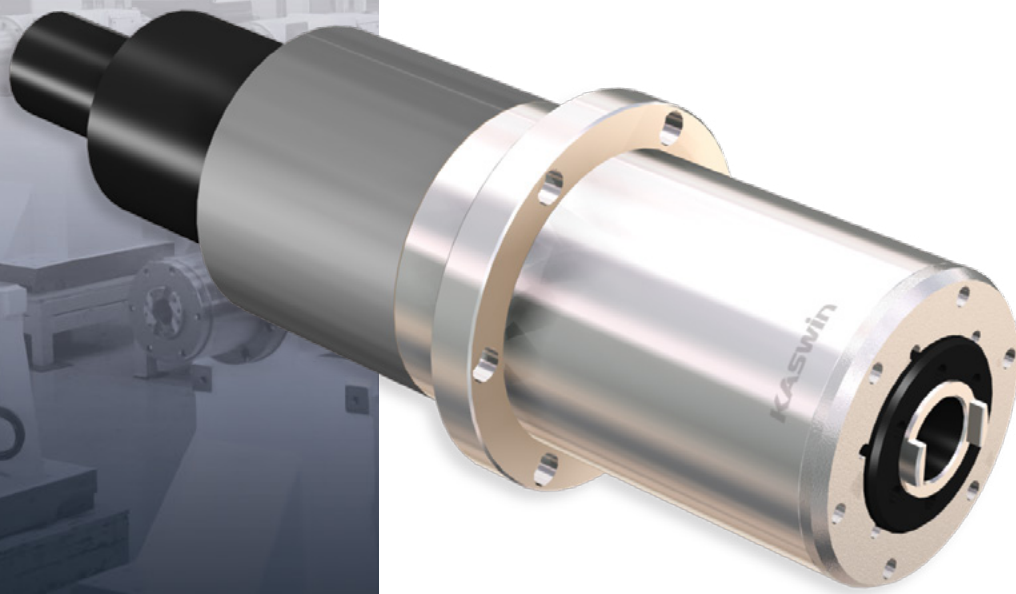
Milling Spindle Built in Type

High Precision Spindle

KSB - E1247

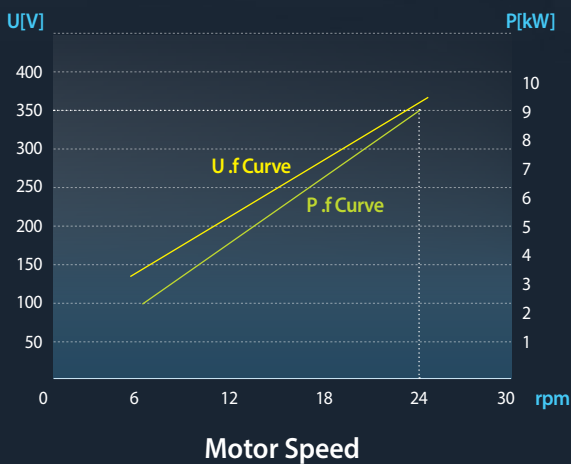
공간절약, 진동 및 소음 감소

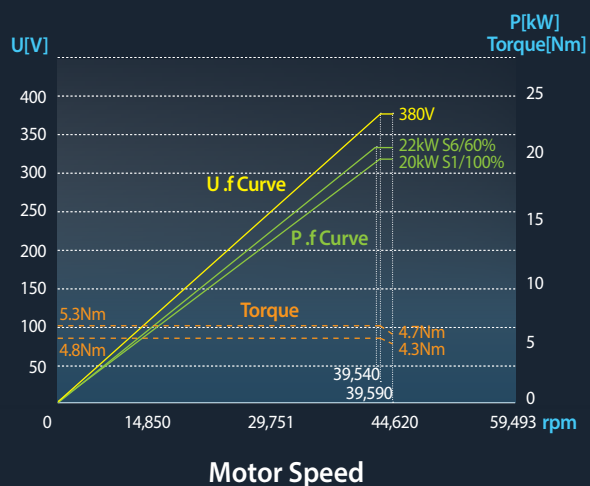
Space-saving, reduction of vibration and noise



Specification

ITEMS	KSB-E1247
HOUSING OUT DIAMETER(mm)	120
WORKING POSITION	HORIZONTAL
MAX SPEED(rpm)	24,000
MAX POWER(kW)	9
MAX TORQUE(Nm)	3.5
TOOL INTERFACE	BBT30
CLAMPING FORCE(N)	4,500
BEARING LUBRICATION	GREASE
BEARING	(FRONT) Ø45
WEIGHT(kg)	25





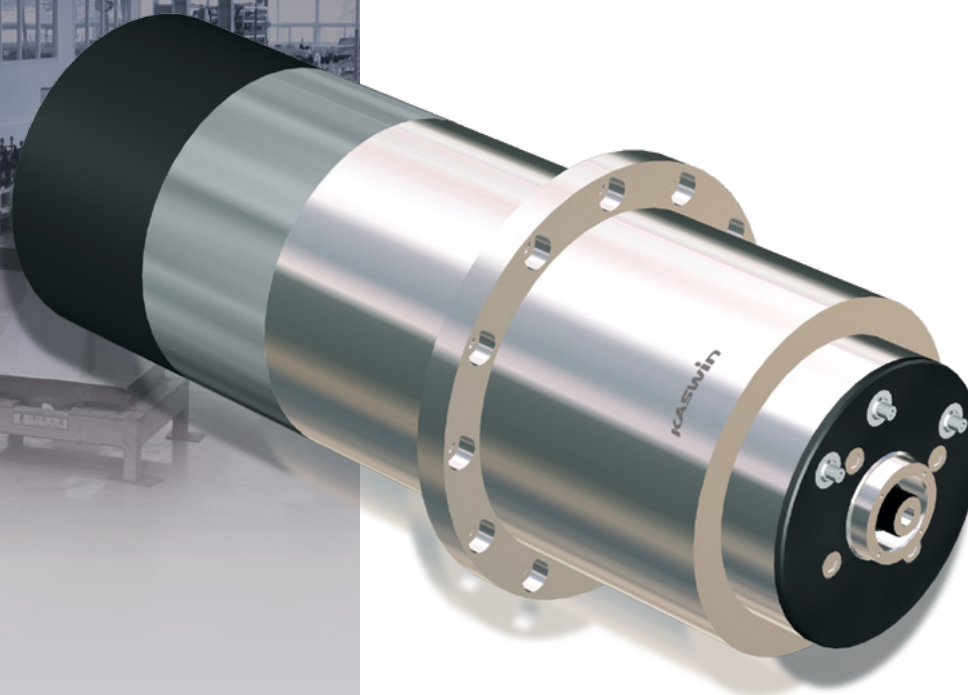
ITEMS	KSB-A1552
HOUSING OUT DIAMETER(mm)	150
WORKING POSITION	VERTICAL
MAX SPEED(rpm)	45,000
MAX POWER(kW)	20
MAX TORQUE(Nm)	4.3
TOOL INTERFACE	HSK-E40
CLAMPING FORCE(N)	6,800
BEARING LUBRICATION	OIL & AIR
BEARING	Ø70
WEIGHT(kg)	50

High Precision Spindle

KSB - A1552

공간절약, 진동 및 소음 감소

Space-saving, reduction of vibration and noise



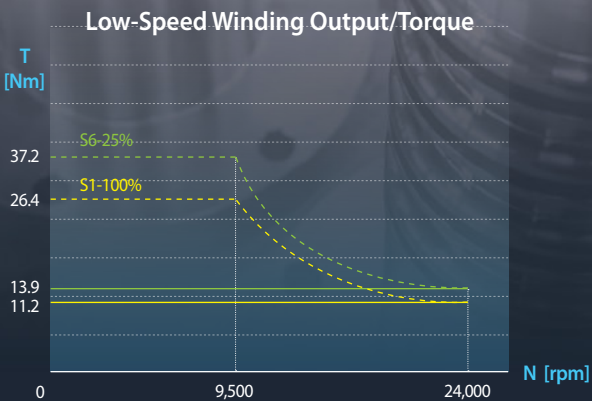
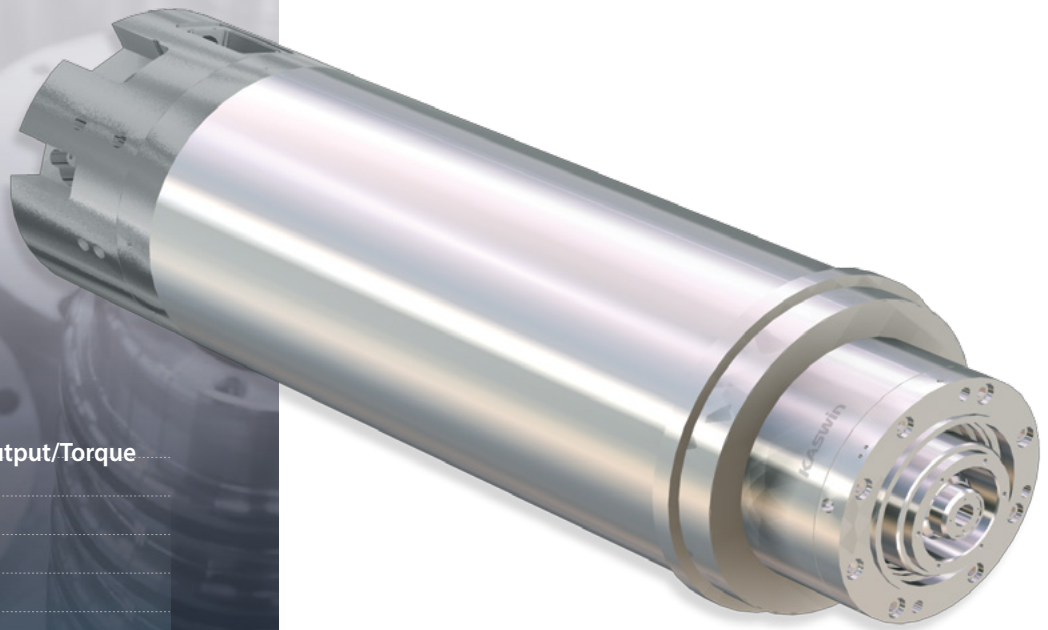
Milling Spindle Built in Type

High Precision Spindle

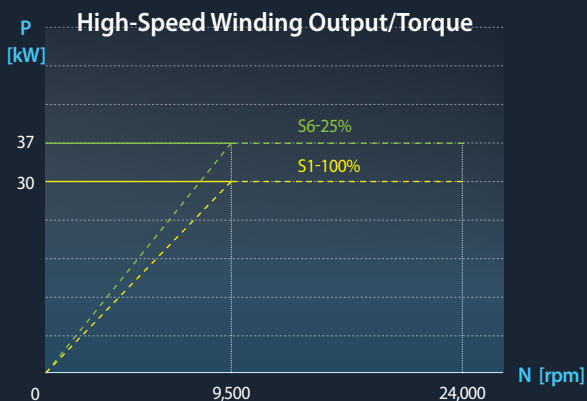
KSB - A1767

공간절약, 진동 및 소음 감소

Space-saving, reduction of vibration and noise



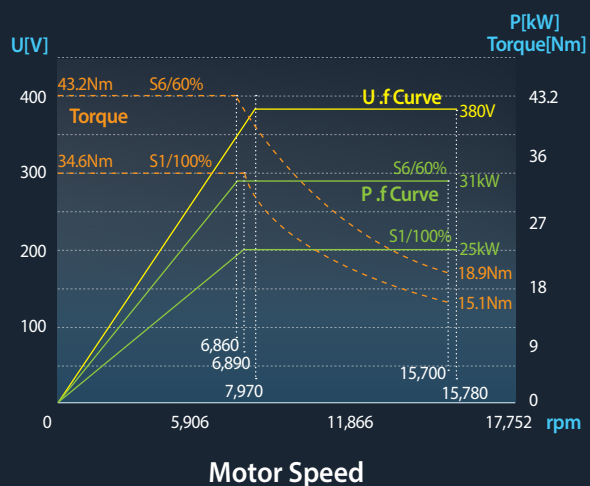
Motor Speed



Motor Speed

Specification

ITEMS	KSB-A1767
HOUSING OUT DIAMETER(mm)	170
WORKING POSITION	HORIZONTAL
MAX SPEED(rpm)	24,000
MAX POWER(kw)	37(S6)/30(S1)
MAX TORQUE(Nm)	37.2(S6)/26.4(S1)
TOOL INTERFACE	HSK-E63
CLAMPING FORCE(N)	18,000
BEARING LUBRICATION	OIL & AIR
BEARING	(F)Ø70 (R)Ø55
WEIGHT(kg)	70



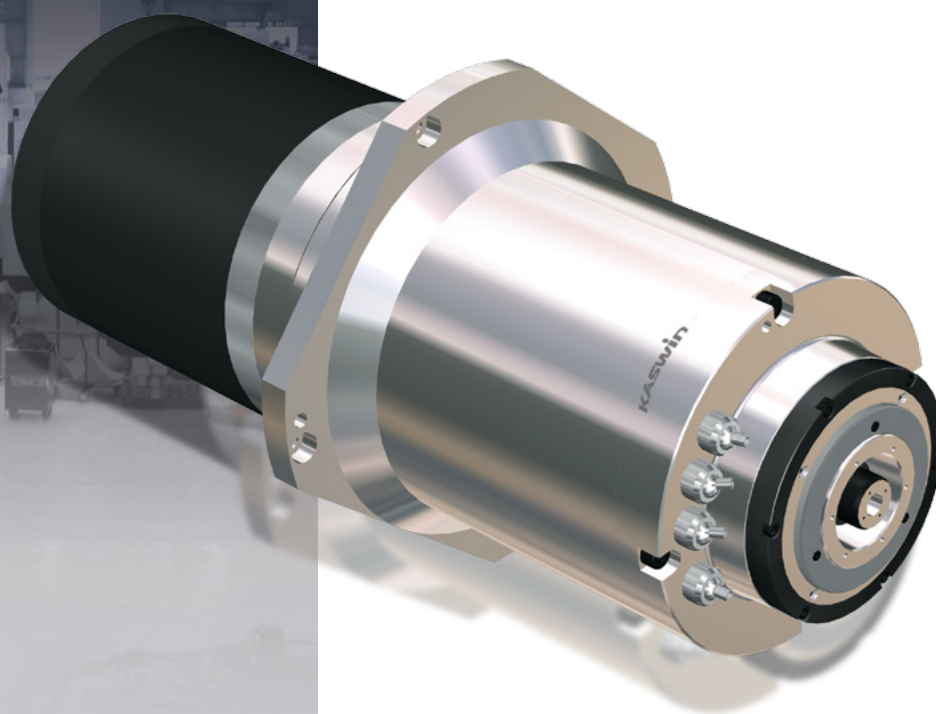
ITEMS	KSB-A2262
HOUSING OUT DIAMETER(mm)	220
WORKING POSITION	HORIZONTAL
MAX SPEED(rpm)	16,000
MAX POWER(kW)	31(S2)/25(S1)
MAX TORQUE(Nm)	43(S6)/34(S1)
TOOL INTERFACE	HSK-A63
CLAMPING FORCE(N)	18,000
BEARING LUBRICATION	OIL & AIR
BEARING	Ø70
WEIGHT(kg)	110

High Precision Spindle

KSB - A2262

공간절약, 진동 및 소음 감소

Space-saving, reduction of vibration and noise



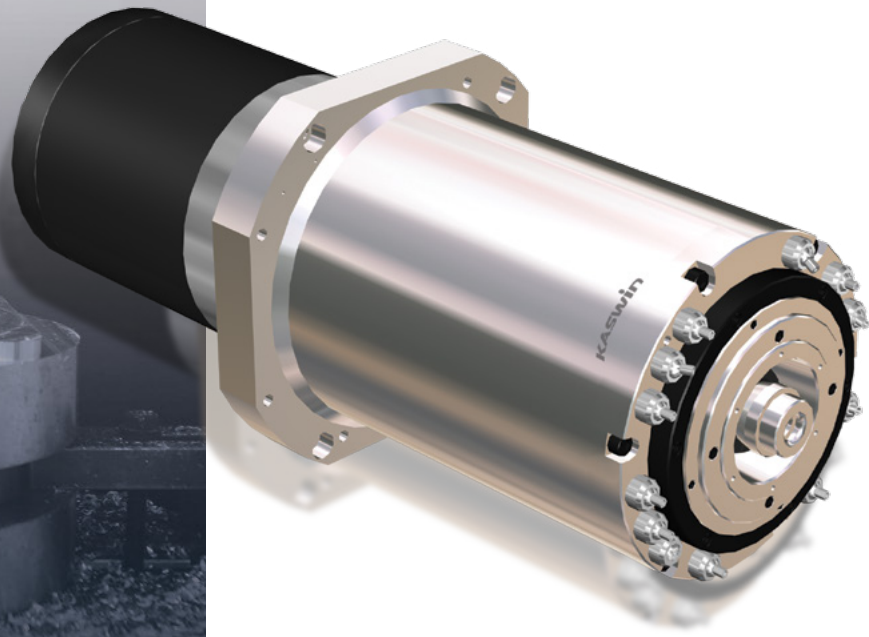
Milling Spindle Built in Type

High Precision Spindle

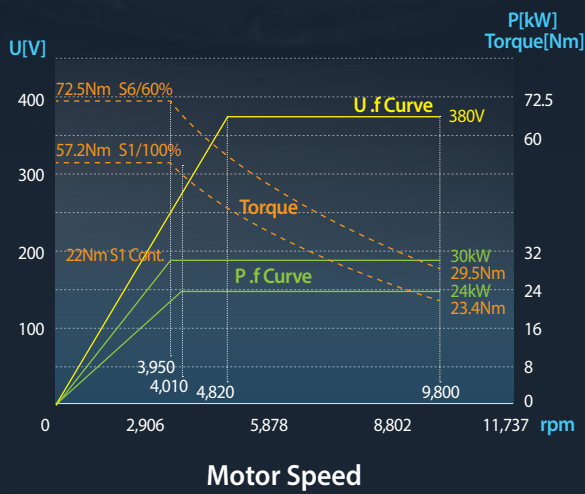
KSB - A2266

공간절약, 진동 및 소음 감소

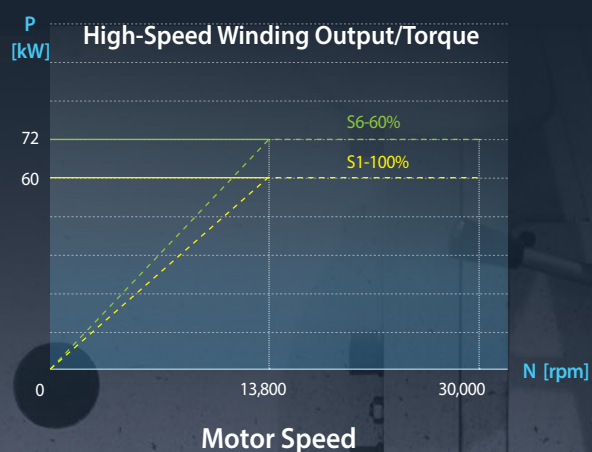
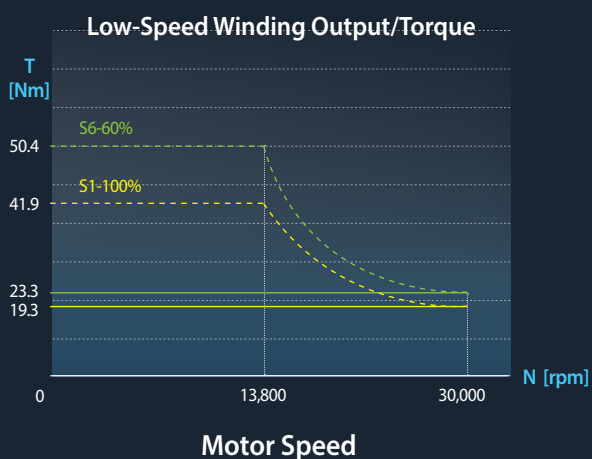
Space-saving, reduction of vibration and noise



Specification



ITEMS	KSB-A2266
HOUSING OUT DIAMETER(mm)	220
WORKING POSITION	HORIZONTAL
MAX SPEED(rpm)	10,000
MAX POWER(kW)	30(S2)/24(S1)
MAX TORQUE(Nm)	72(S6)/57(S1)
TOOL INTERFACE	HSK-A100
CLAMPING FORCE(N)	45,000N
BEARING LUBRICATION	OIL & AIR
BEARING	Ø100
WEIGHT(kg)	120



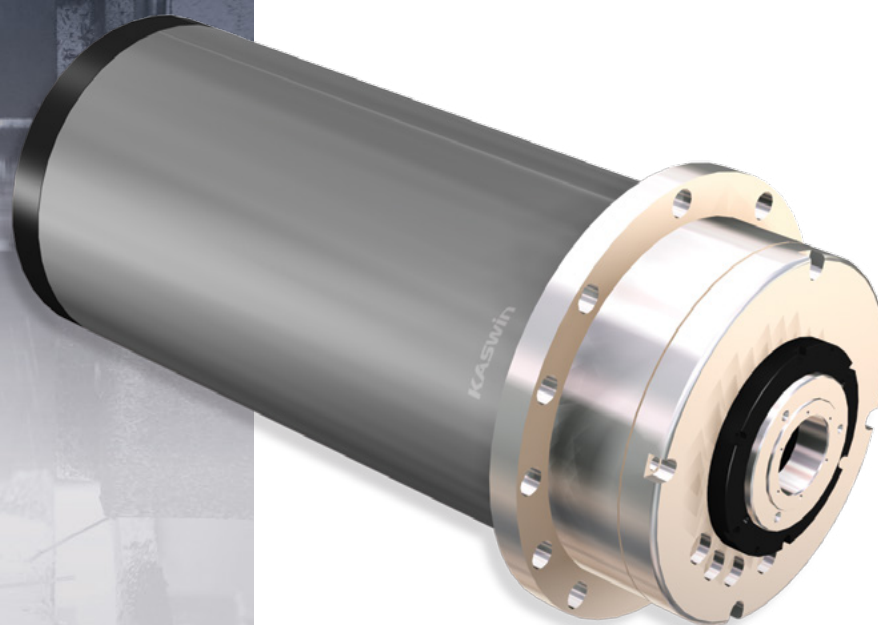
ITEMS	KSB-2363
HOUSING OUT DIAMETER(mm)	230
WORKING POSITION	VERTICAL
MAX SPEED(rpm)	30,000
MAX POWER(kW)	60
MAX TORQUE(Nm)	50.4(S6-60%)
TOOL INTERFACE	HSK-A63
CLAMPING FORCE(N)	18,000
BEARING LUBRICATION	OIL & AIR
BEARING	(F):Ø70 (R):Ø55
WEIGHT(kg)	142

High Precision Spindle

KSB - A2363

공간절약, 진동 및 소음 감소

Space-saving, reduction of vibration and noise



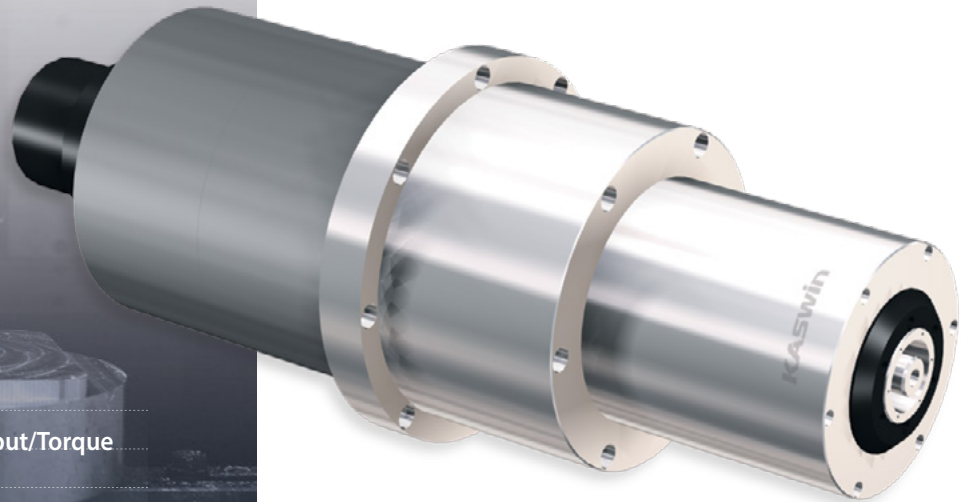
Milling Spindle Built in Type

High Precision Spindle

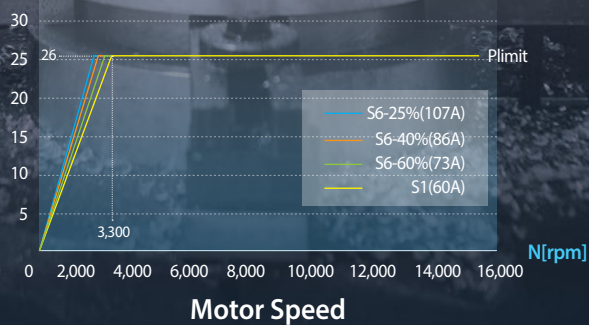
KSB - S2374

공간절약, 진동 및 소음 감소

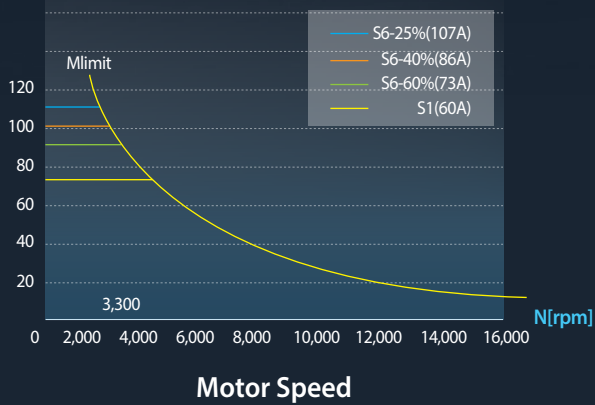
Space-saving, reduction of vibration and noise



P[Kw] Low-Speed Winding Output/Torque

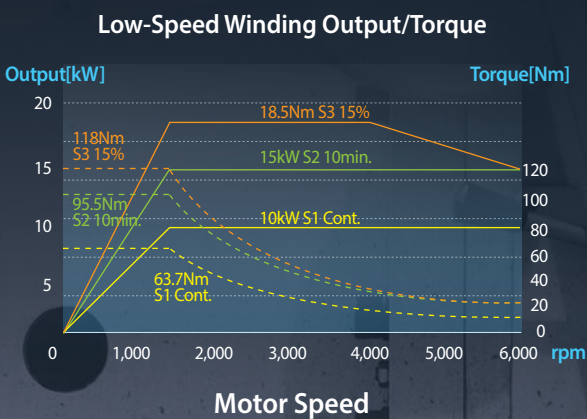
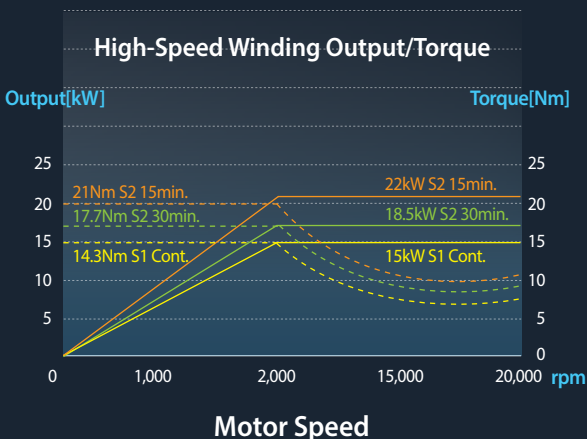


M[Nm] High-Speed Winding Output/Torque



Specification

ITEMS	KSB-S2374
HOUSING OUT DIAMETER(mm)	230
WORKING POSITION	HORIZONTAL
MAX SPEED(rpm)	15,000
MAX POWER(kw)	26
MAX TORQUE(Nm)	103
TOOL INTERFACE	HSK-A63
CLAMPING FORCE(N)	18,000
BEARING LUBRICATION	OIL & AIR
BEARING	Ø70
WEIGHT(kg)	120



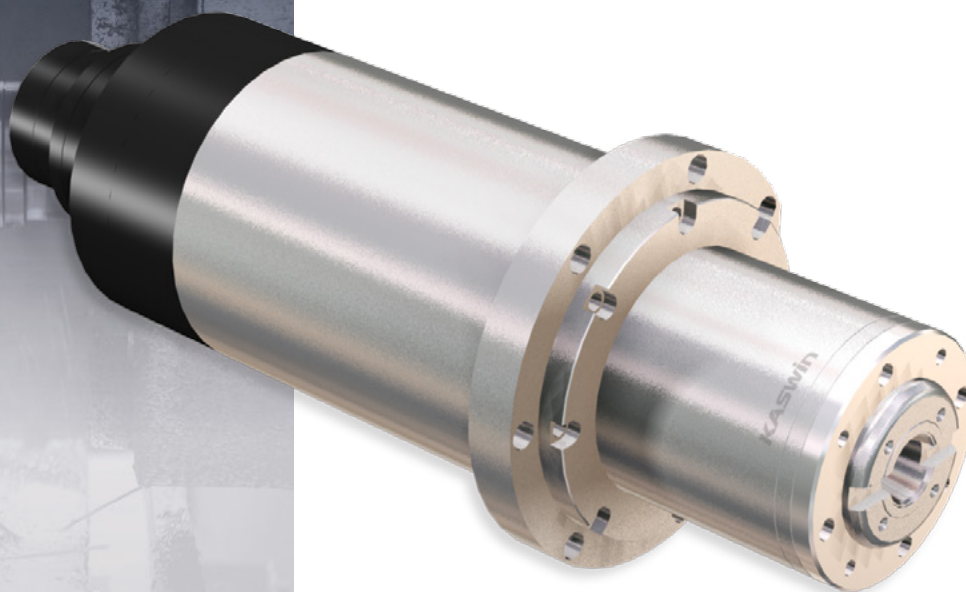
ITEMS	KSB-F2382i
HOUSING OUT DIAMETER(mm)	230
WORKING POSITION	VERTICAL
MAX SPEED(rpm)	20,000
MAX POWER(kW)	22
MAX TORQUE(Nm)	118
TOOL INTERFACE	BBT40
CLAMPING FORCE(N)	10,000
BEARING LUBRICATION	OIL & AIR
BEARING	Ø70
WEIGHT(kg)	120

High Precision Spindle

KSB - F2382i

공간절약, 진동 및 소음 감소

Space-saving, reduction of vibration and noise



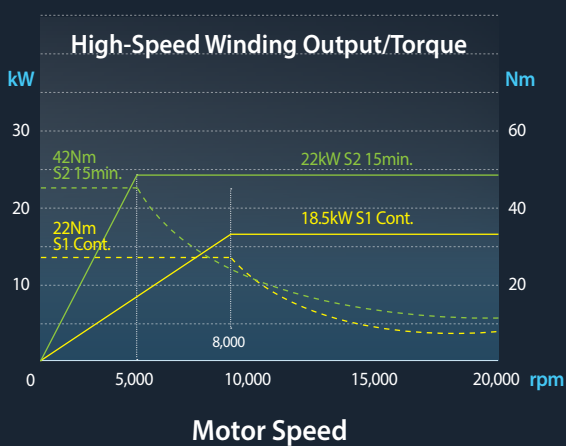
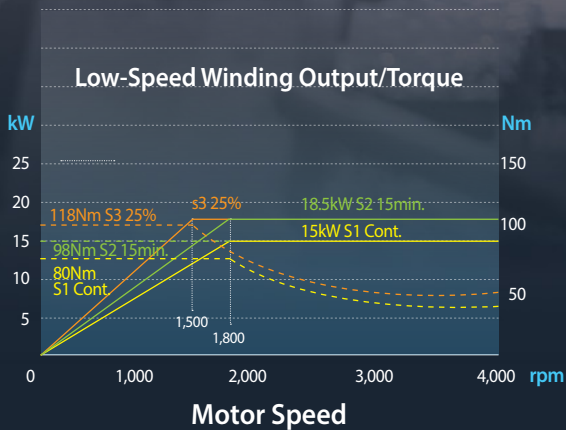
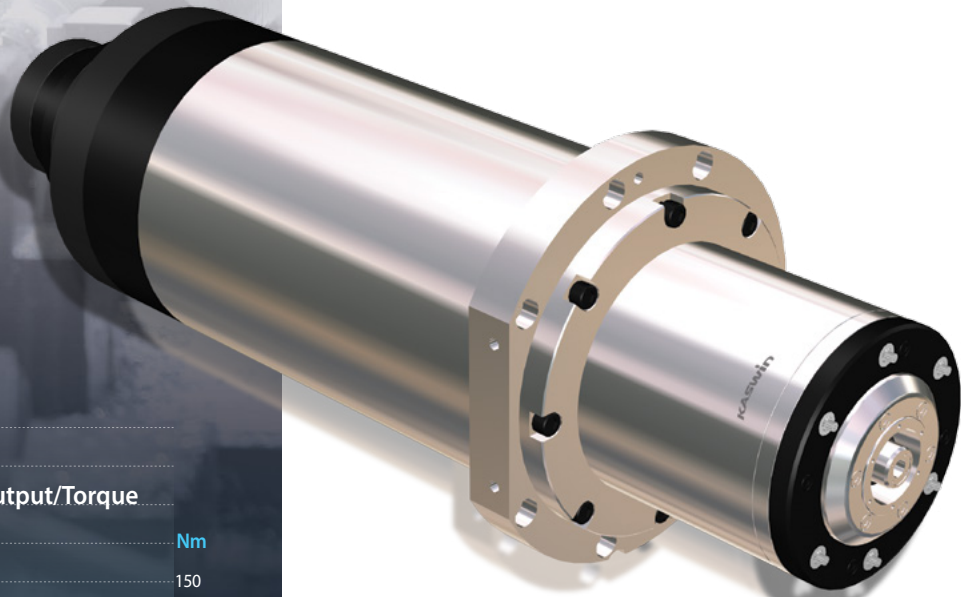
Milling Spindle Built in Type

High Precision Spindle

KSB - F2386

공간절약, 진동 및 소음 감소

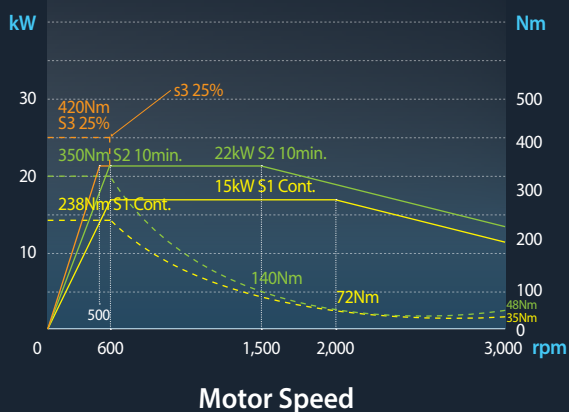
Space-saving, reduction of vibration and noise



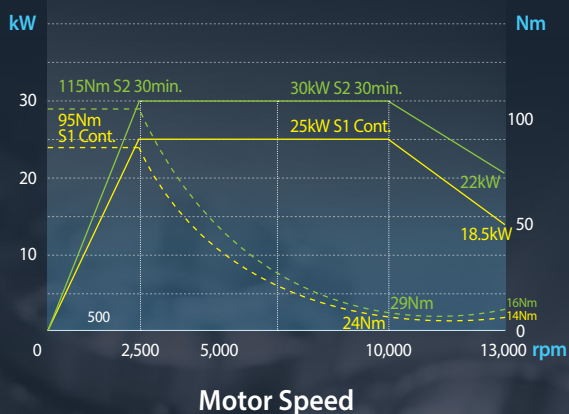
Specification

ITEMS	KSB-F2386
HOUSING OUT DIAMETER(mm)	230
WORKING POSITION	HORIZONTAL
MAX SPEED(rpm)	16,000
MAX POWER(kW)	22(S2)/18.5(S1)
MAX TORQUE(Nm)	118(S6)/80(S1)
TOOL INTERFACE	HSK-A63
CLAMPING FORCE(N)	18,000N
BEARING LUBRICATION	OIL & AIR
BEARING	Ø70
WEIGHT(kg)	155

Low-Speed Winding Output/Torque



High-Speed Winding Output/Torque



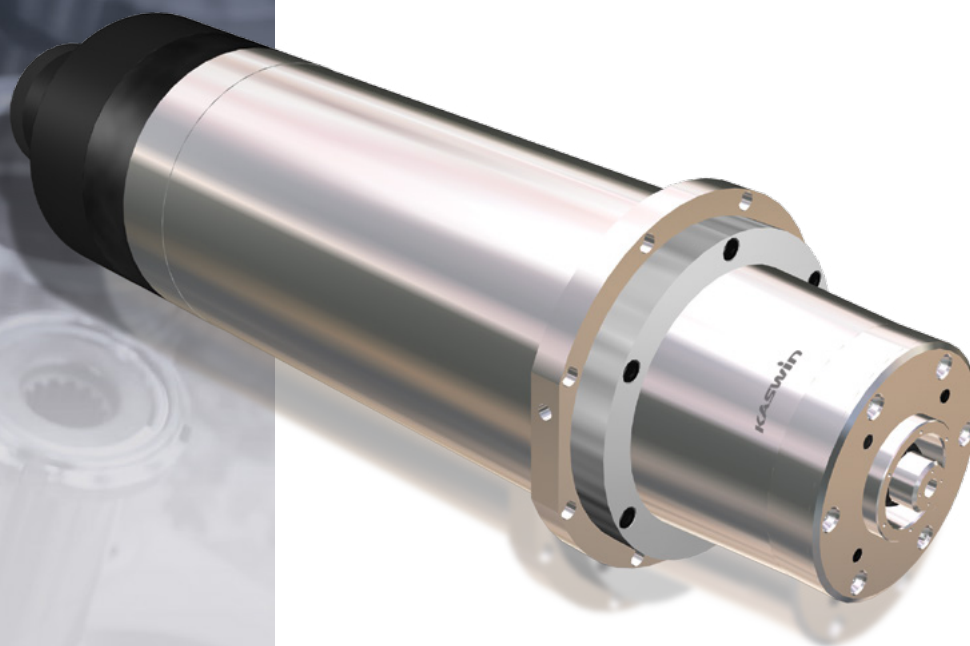
ITEMS	KSB-F28120
HOUSING OUT DIAMETER(mm)	280
WORKING POSITION	HORIZONTAL
MAX SPEED(rpm)	13,000
MAX POWER(kW)	30(S2)/25(S1)
MAX TORQUE(Nm)	420(S3)/238(S1)
TOOL INTERFACE	HSK-A100
CLAMPING FORCE(N)	45,000
BEARING LUBRICATION	OIL & AIR
BEARING	Ø100
WEIGHT(kg)	330

High Precision Spindle

KSB - F28120

공간절약, 진동 및 소음 감소

Space-saving, reduction of vibration and noise



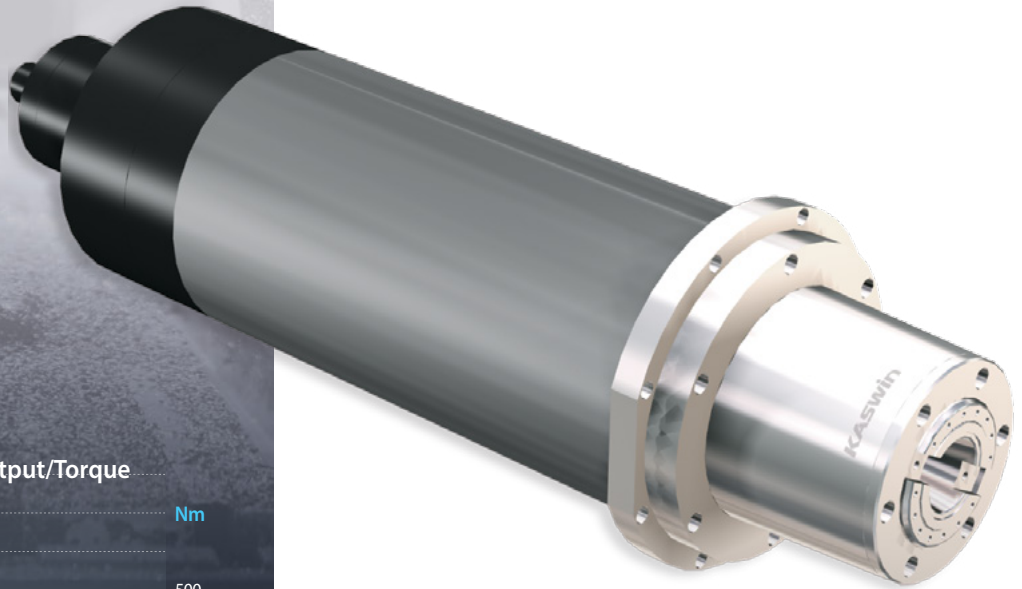
Milling Spindle Built in Type

High Precision Spindle

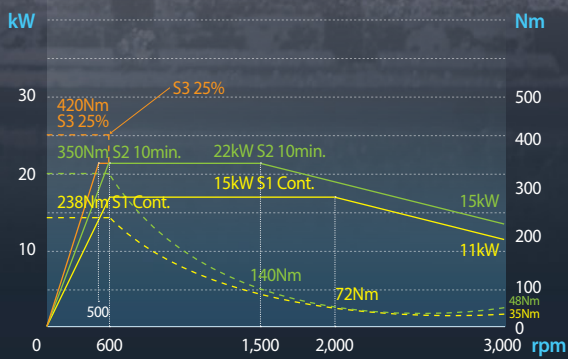
KSB - F30120

공간절약, 진동 및 소음 감소

Space-saving, reduction of vibration and noise



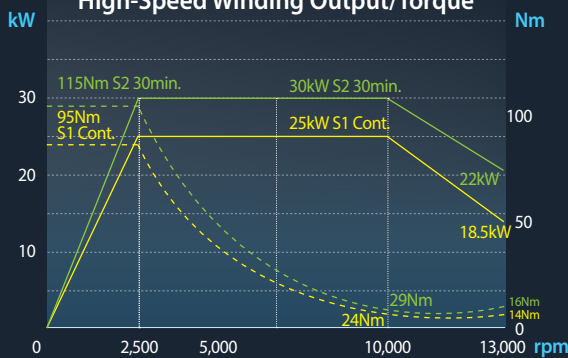
Low-Speed Winding Output/Torque



Motor Speed

Specification

High-Speed Winding Output/Torque



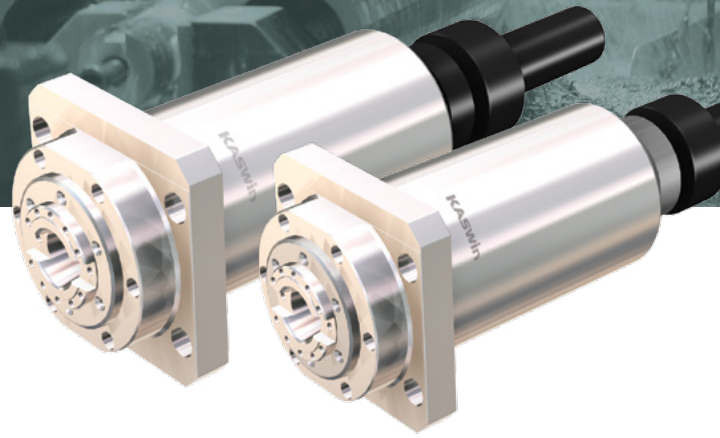
Motor Speed

ITEMS	KSB-F30120
HOUSING OUT DIAMETER(mm)	300
WORKING POSITION	HORIZON & VERTICAL
MAX SPEED(rpm)	12,000
MAX POWER(kW)	30
MAX TORQUE(Nm)	420
TOOL INTERFACE	BBT50
CLAMPING FORCE(N)	23,000
BEARING LUBRICATION	OIL & AIR
BEARING	Ø100
WEIGHT(kg)	330

Milling Spindle Direct Type

High Precision Spindle

스핀들 헤드의 열변위 최소화
Minimize thermal displacement of spindle head



ITEMS	KSD-1141	KSD-1146	KSD-1147
MACHINE	MACHINING CENTER	MACHINING CENTER	TAPPING CENTER
SPINDLE TAPER TYPE	BT30	BT30	BT30
SPINDLE SPEED	15,000rpm	12,000rpm	20,000rpm
LUBRICATION TYPE	GREASE	GREASE	GREASE
BEARING	Ø50	Ø50	Ø50
CLAMPING FORCE	400~430 kgf	430 kgf	400~430 kgf
DYNAMIC BALANCE	G1.0/15,000rpm	G1.0/12,000rpm	G1.0/20,000rpm

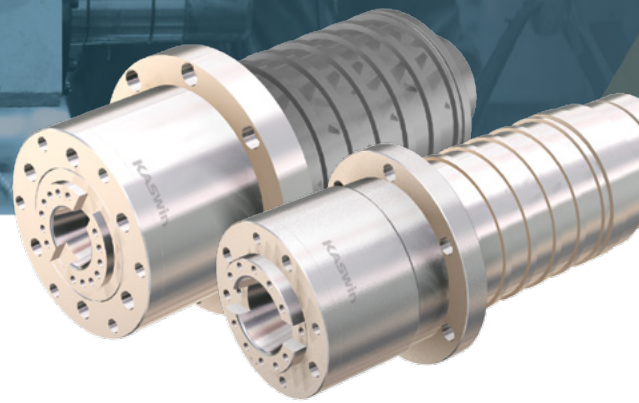
ITEMS	KSD-1466	KSD-1556	KSD-1654
MACHINE	MACHINING CENTER	MACHINING CENTER	MACHINING CENTER
SPINDLE TAPER TYPE	BT40	BBT40	BT40
SPINDLE SPEED	12,000rpm	15,000rpm	12,000rpm
LUBRICATION TYPE	GREASE	GREASE	GREASE
BEARING	Ø65	Ø70	Ø70
CLAMPING FORCE	830 kgf	1,000 kgf(±100 kgf)	1,050 kgf(±50 kgf)
DYNAMIC BALANCE	G1.0/12,000rpm	G1.0/15,000rpm	G1.0/12,000rpm

ITEMS	KSD-1966	KSD-2060	KSD-2696
MACHINE	MACHINING CENTER	MACHINING CENTER	VERTICAL LATHE & MCT
SPINDLE TAPER TYPE	BT50	BT40	BT50
SPINDLE SPEED	6,000rpm	10,000rpm	1,500rpm
LUBRICATION TYPE	GREASE	GREASE	GREASE
BEARING	(FRONT) Ø85, (REAR) Ø70	Ø70	Ø130
CLAMPING FORCE	1,200 kgf(±50 kgf)	750~1,000 kgf	2,000 kgf(±100 kgf)
DYNAMIC BALANCE	G1.0/6,000rpm	G2.5/10,000rpm	G1.0/1,500rpm

Milling Spindle Belt Type

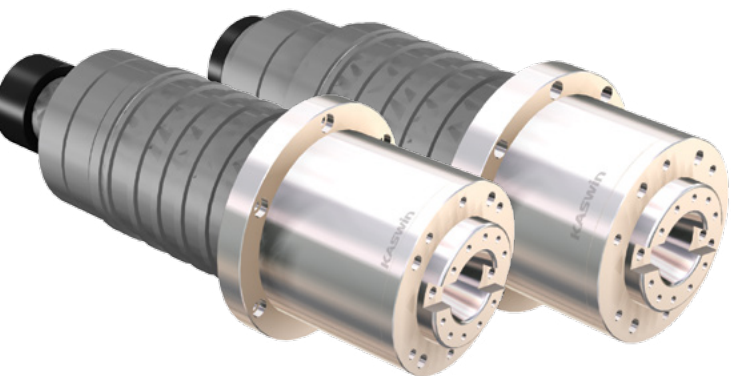
High Precision Spindle

강력한 쿨링 시스템에 의한 적정온도 유지
Main proper temperature by forced-cooling system



ITEMS	KSV-1551	KSV-1560	KSV-1963
MACHINE	MACHINING CENTER	MACHINING CENTER	MACHINING CENTER
SPINDLE TAPER TYPE	BT40	BT50	BT50
SPINDLE SPEED	8,000rpm	8,000rpm	6,000rpm
LUBRICATION TYPE	GREASE	GREASE	GREASE
BEARING	Ø65	Ø80	Ø100
CLAMPING FORCE	800 kgf(±100kgf)	1,500 kgf(±100kgf)	1,900 kgf(±100kgf)
DYNAMIC BALANCE	G1.0/8,000rpm	G1.0/8,000rpm	G1.0/6,000rpm

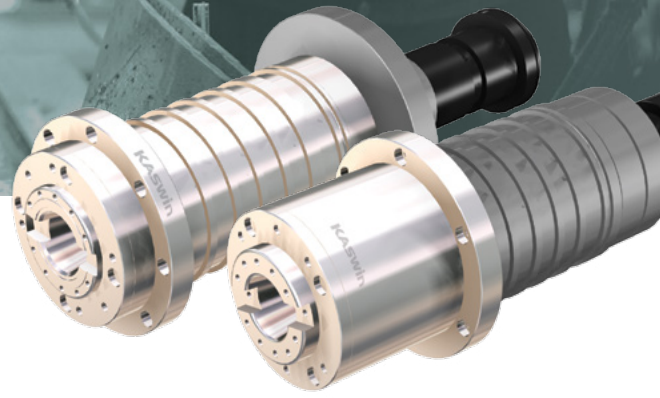
ITEMS	KSV-1965	KSV-1993	
MACHINE	MACHINING CENTER	MACHINING CENTER	
SPINDLE TAPER TYPE	BT50	BT50	
SPINDLE SPEED	6,000rpm	6,000rpm	
LUBRICATION TYPE	GREASE	GREASE	
BEARING	Ø100	(FRONT) Ø100, (REAR) Ø90	
CLAMPING FORCE	1,900 kgf(±100kgf)	1,900 kgf(±100kgf)	
DYNAMIC BALANCE	G1.0/6,000rpm	G1.0/6,000rpm	



High Precision Spindle

지속적인 기술 개발과 축적을 통해 발전하는 카스윈 입니다.
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Milling Spindle Gear Type



High Precision Spindle

강력한 쿨링 시스템에 의한 적정온도 유지
Main proper temperature by forced-cooling system

ITEMS	KSG-1974
MACHINE	MACHINING CENTER
SPINDLE TAPER TYPE	BT50
SPINDLE SPEED	6,000rpm
LUBRICATION TYPE	GREASE
BEARING	(FRONT) Ø100, (REAR) Ø85
CLAMPING FORCE	1,900 kgf(±100 kgf)
DYNAMIC BALANCE	G1.0/6,000rpm

ITEMS	KSG-1974
MACHINE	MACHINING CENTER
SPINDLE TAPER TYPE	BT50
SPINDLE SPEED	4,500rpm
LUBRICATION TYPE	GREASE
BEARING	(FRONT) Ø100, (REAR) Ø85
CLAMPING FORCE	1,900 kgf(±100 kgf)
DYNAMIC BALANCE	G1.0/4,500rpm

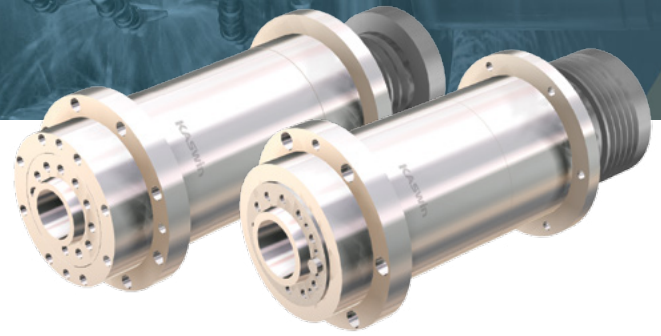
ITEMS	KSG-1985
MACHINE	MACHINING CENTER
SPINDLE TAPER TYPE	BT50
SPINDLE SPEED	6,000rpm
LUBRICATION TYPE	OIL & AIR
BEARING	(FRONT) Ø100, (REAR) Ø100
CLAMPING FORCE	2,100 kgf(±100 kgf)
DYNAMIC BALANCE	G1.0/6,000rpm

High Precision Spindle

Turning Spindle

High Precision Spindle

지속적인 기술 개발과 축적을 통해 발전하는 카스윈 입니다.
KASWIN! We are developed by continued technology development and accumulation.



ITEMS	KSL-A2774	KSL-A2781	KSL-A3210	KSL-A3211	KSL-A3476
APPLICATION MACHINE	MULTI-LATHE	MULTI-LATHE	MULTI-LATHE	MULTI-LATHE	MULTI-LATHE
WORKING POSITION	HORIZONTAL	HORIZONTAL	VERTICAL	VERTICAL	HORIZONTAL
SPINDLE NOSE NO.	A2-6	A2-6	A2-11	A2-11	A2-8
APPLICATION CHUCK SIZE	8",10"	8",10"	12",15"	12",15"	10",12"
SPINDLE SPEED	5,000rpm	5,000rpm	3,000rpm	2,400rpm	4,500rpm
LUBRICATION TYPE	GREASE	GREASE	GREASE	GREASE	GREASE
BEARING	(FRONT) Ø100, (REAR) Ø90	Ø100	Ø120	Ø120	Ø120
SPINDLE POWER	15kW (S6-40%) MAX.	22kW (S6-40%) MAX.	45kW(S6-40%)MAX.	71kW (S6-40%) MAX.	27kW (S6-40%) MAX.
SPINDLE TORQUE	243Nm (S6-40%)MAX.	350Nm (S6-40%)MAX.	544Nm(S6-40%)MAX.	797Nm (S6-40%)MAX.	515Nm (S6-40%)MAX.
ACCURACY	SPINDLE TAPER=0.003 SPINDLE SECTION=0.003	SPINDLE TAPER=0.003 SPINDLE SECTION=0.003	SPINDLE TAPER=0.003 SPINDLE SECTION=0.003	SPINDLE TAPER=0.003 SPINDLE SECTION=0.003	SPINDLE TAPER=0.003 SPINDLE SECTION=0.003
DYNAMIC BALANCE	G1,0/5,000rpm	G1,0/5,000rpm	G1,0/3,000rpm	G1,0/2,400rpm	G1,0/4,500rpm

ITEMS	KSL-A3489	KSL-A3796	KSL-2889	KSL-3689	KSL-2052
APPLICATION MACHINE	MULTI-LATHE	MULTI-LATHE	LATHE	LATHE	LATHE
WORKING POSITION	HORIZONTAL	HORIZONTAL	HORIZONTAL	HORIZONTAL	HORIZONTAL
SPINDLE NOSE NO.	A2-8	A2-11	A2-11	A2-11	A2-6
APPLICATION CHUCK SIZE	10",12"	15"	15"	18"	8"
SPINDLE SPEED	4,000rpm	3,500rpm	2,000rpm	2,000rpm	4,200rpm
LUBRICATION TYPE	GREASE	GREASE	GREASE	GREASE	GREASE
BEARING	Ø130	Ø150	Ø180	Ø240	
SPINDLE POWER	31.5kW (S6-40%) MAX.	37.5kW (S6-40%) MAX.			
SPINDLE TORQUE	771Nm (S6-40%)MAX.	918Nm (S6-40%)MAX.			
ACCURACY	SPINDLE TAPER=0.003 SPINDLE SECTION=0.003	SPINDLE TAPER=0.003 SPINDLE SECTION=0.003			
DYNAMIC BALANCE	G1,0/4,000rpm	G1,0/3,500rpm			

ITEMS	KSL-2166	KSL-1445	KSL-1749		
APPLICATION MACHINE	LATHE	LATHE	LATHE		
WORKING POSITION	HORIZONTAL	HORIZONTAL	HORIZONTAL		
SPINDLE NOSE NO.		A2-4	A2-5		
APPLICATION CHUCK SIZE		6"	6"		
SPINDLE SPEED	5,000rpm	6,000rpm	6,000rpm		
LUBRICATION TYPE	GREASE	GREASE	GREASE		
BEARING	(F):Ø100 (R):Ø110	(F):Ø70 (R):Ø70	(F):Ø80 (R):Ø80		

High Precision Spindle

Grinding Spindle

High Precision Spindle

고속에 의한 생산성 및 정도 향상

Improved productivity and accuracy by high speed process

ITEMS	KSH-1145	KSH-1239	KSH-0826
APPLICATION MACHINE	EDGE GRINDER	EDGE GRINDER	EDGE GRINDER
WORKING POSITION		VERTICAL	VERTICAL
SPINDLE TAPER TYPE	BBT30	BBT30	SUS420J2
SPINDLE SPEED	24,000rpm	24,000rpm	15,000rpm
LUBRICATION TYPE	GREASE	GREASE	GREASE
BEARING	(F): \varnothing 45 (R): \varnothing 40	(F): \varnothing 45 (R): \varnothing 40	(F): \varnothing 35 (R): \varnothing 20
SPINDLE POWER		27kW (S6-40%) MAX.	1.25kW
CLAMPING FORCE		3,800N \pm 200N	
ACCURACY		SPINDLE TAPER=0.002 SPINDLE NOSE=0.002	
		AT BASE OF TEST BAR=0.003 AT END OF 300 TEST BAR=0.010	
DYNAMIC BALANCE		0.3mm/sec0 $\bar{\sigma}$ /10,000rpm	
AIR CYLINDER		6,000N/5.0bar	

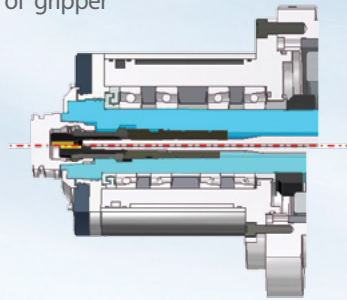
ITEMS	KSH-0622
APPLICATION MACHINE	EDGE GRINDER
WORKING POSITION	HORIZONTAL
SPINDLE TAPER TYPE	SUS420J2
SPINDLE SPEED	20,000rpm
LUBRICATION TYPE	GREASE
BEARING	(F): \varnothing 25 (R): \varnothing 15
SPINDLE POWER	0.65kW (S6-40%) MAX.
CLAMPING FORCE	
ACCURACY	SPINDLE TAPER=0.002 SPINDLE NOSE=0.002
DYNAMIC BALANCE	0.2mm/sec 0 $\bar{\sigma}$ / 20,000rpm

High Precision SPINDLE

Built in Type

01 / GAUGE DIMENSION

Gauge dimension to be adjusted only in unclamped position of gripper



02 / SPINDLE TAPER TYPE

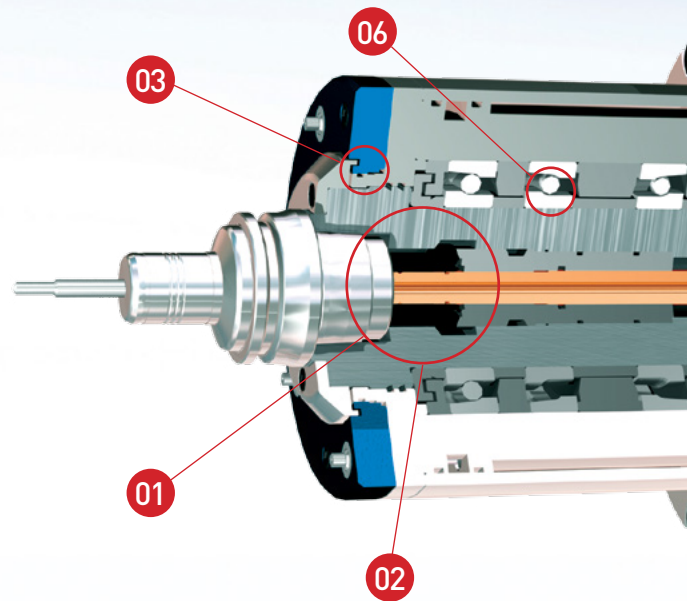
Gripper unit, HSK Clamping unit

- 1 HSK-A63
KSB - A2262, KSB - F2386
- 2 HSK - A100
KSB - A28120, KSB - A2266
- 4 BT30
KSB - E1145, KSB - E1239
- 5 HSK - E40
KSB-A1552

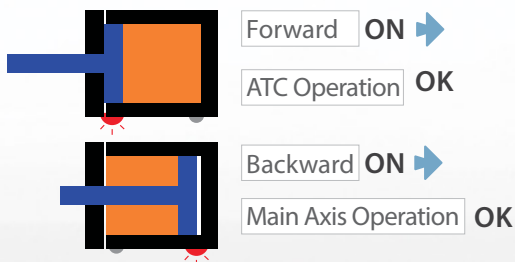


Built-in Spindle Motor what perform milling and tapping is equipped with Encoder

Built-in Spindle is applied to machine tool of above intermediate grade Customs who want more higher quality and productivity choice Built-in Spindle. Built-in Spindle will give Machine tool high speed cutting and low vibration level in addition to strong motor.

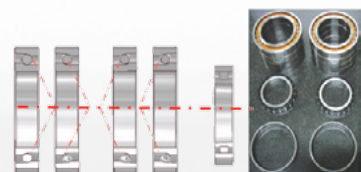


05 / UNCLAMP PISTON ACTION



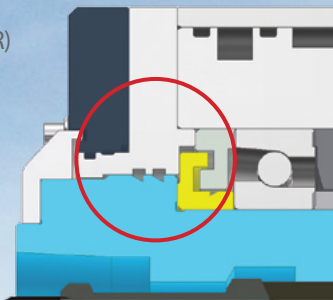
06 / HIGH RIGIDITY-BEARING MOUNT

- It applies highly accurate Ceramic-Ball to revolution system so It maintains high speed, high accuracy and high rigidity
- It gets necessary rigidity depend on number of compound-row and preload



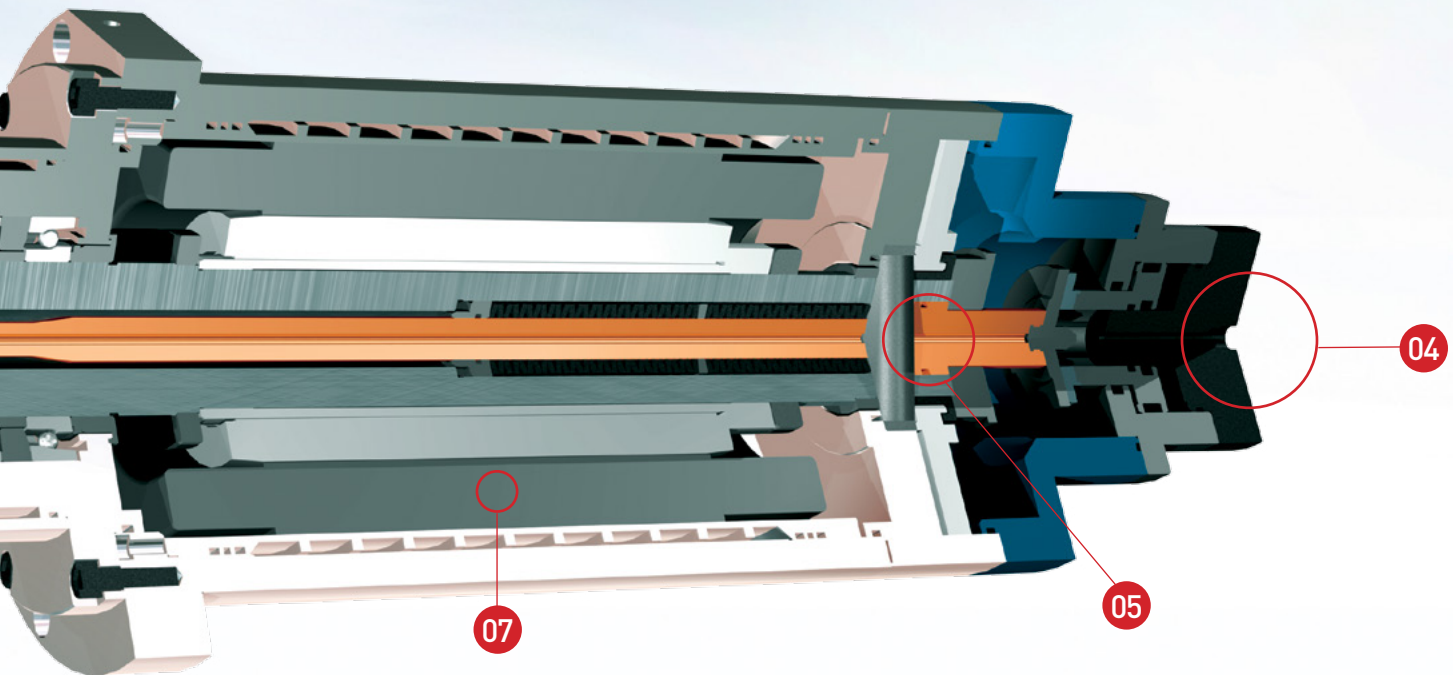
03 / PREVENTION OF CUTTING FLUID INTRUSION

4 Layer system
(LABYRINTH, AIR SEAL, SEAL GAP, FRINGER)



04 / ROTARY UNION

THROUGH COOLANT
Endure pressure of below 7Mpa



07 / BUILT-IN MOTOR

Low vibration

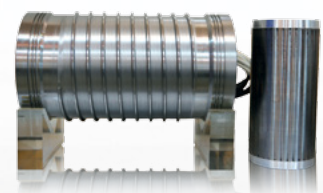
Low vibration, improved process accuracy,
extended tool life by direct drive

Compact

Motor is equipped between front bearing and rear bearing so
it is lightweight and compact

Reduction of assembly time

Axis and motor are integrated so it does NOT require adjusting
motor to center and alignment





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KASWIN

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