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ORS KOREA

“The world rotates with us”



Office & Factory

184, Jayumyeok 3-gil, Masanhoewon-gu,
Changwon-si, Gyeongsangnam-do, Korea.
Factory Building No. 5

Tel : +82-(0)55-716-2876 Fax : +82-(0)505-719-2876

E-mail : orskorea@orskorea.com

Web : www.orskorea.com

High Precision Spindles



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ORS
KOREA

Greetings

ORSKOREA is a specialist of high-precision and high speed spindles who is leading the **Korean market with extensive experience and knowledge in machining technology.**

Knowing that spindles operate at the highest speed and require the highest precision among all the various kinds of spindles, ORSKOREA ceaselessly challenges ourselves and makes our utmost efforts to achieve a higher maximum speed and zero-error precision. Because we use advanced bearing products for the most important parts of high-speed spindles such as bearings and high-frequency motors.

We always put our customers' reliable service and great satisfaction as a priority.

Spindle technology is one of the core values of machine tool technology. Our achievement of developing 120,000 RPM spindle, currently the highest speed in Korea, proves that we have up-to-date spindle technology in the domestic market.

By using quality parts and pursuing continuous development in design and technology, we can confidently say that ORSKOREA will be your best choice for spindles.

ORSKOREA's Spindles

ORSKOREA is the best choice for spindles.

01 High Speed

ORSKOREA leads the spindles manufacturing technology in Korea. Our high frequency spindles reach speed up to 120,000 rpm, which is the highest speed spindle manufactured in Korea.

03 High Stiffness

In order to ensure the highest output and durability, ORSKOREA uses hybrid ceramic angular bearings from German. We always provide our clients with the highest DMN standard products.

05 Balancing

To reduce vibration, ORSKOREA engineered and built our spindles with VPT (Vibration Prevention Technology) to prevent unbalancing. This process is done by Static and Dynamic Balancing.

07 Patents

ORSKOREA is a holder of a diverse spindle patent portfolio. We currently have five patents for high-frequency motor spindles and apply them to our products every year.

09 Customization

Our comprehensive design and manufacturing capabilities can accommodate different needs of our clients. Our product scope of spindles ranges from 10,000 rpm to 120,000 rpm.

02 Technological Partnership

We are the only company in Korea that has a technological partnership with ORS Inc. by combining the know-hows of machine and spindle manufacturing with precision bearing manufacturing and production. We understand the machine operators and engineers needs and seek for better solution for them.

04 Precision Bearing

We use ultra-precision bearings (ISOP2) for our spindles. For top quality spindles this is the industry standard which ORSKOREA abides.

06 Quality Parts

ORSKOREA's spindles are manufactured with the highest quality parts. This allows our spindles to operate at the highest level of accuracy and precision.

08 Originality

Applying extensive innovative ideas came from our extensive experience in spindles manufacturing, we continuously invest in research and development to expand our knowledge.

10 Reliable Partner

ORSKOREA is a reliable partner. From Built-in (HF) motor spindles, Hydro-Static/ Dynamic spindles to Belt-Driven spindles and more. ORSKOREA will always provide you the best spindle solution.

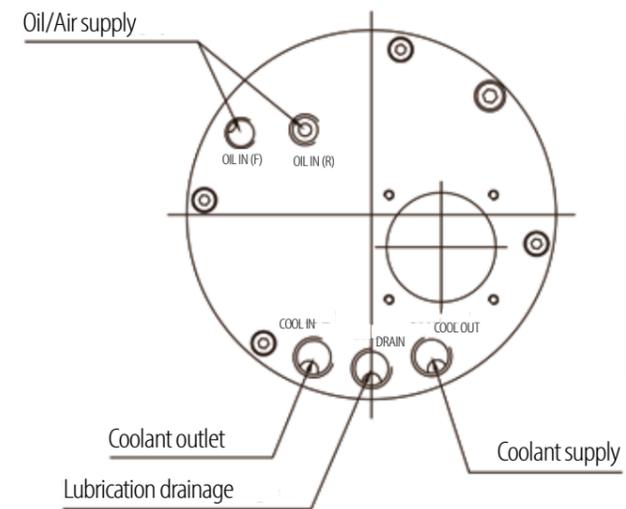
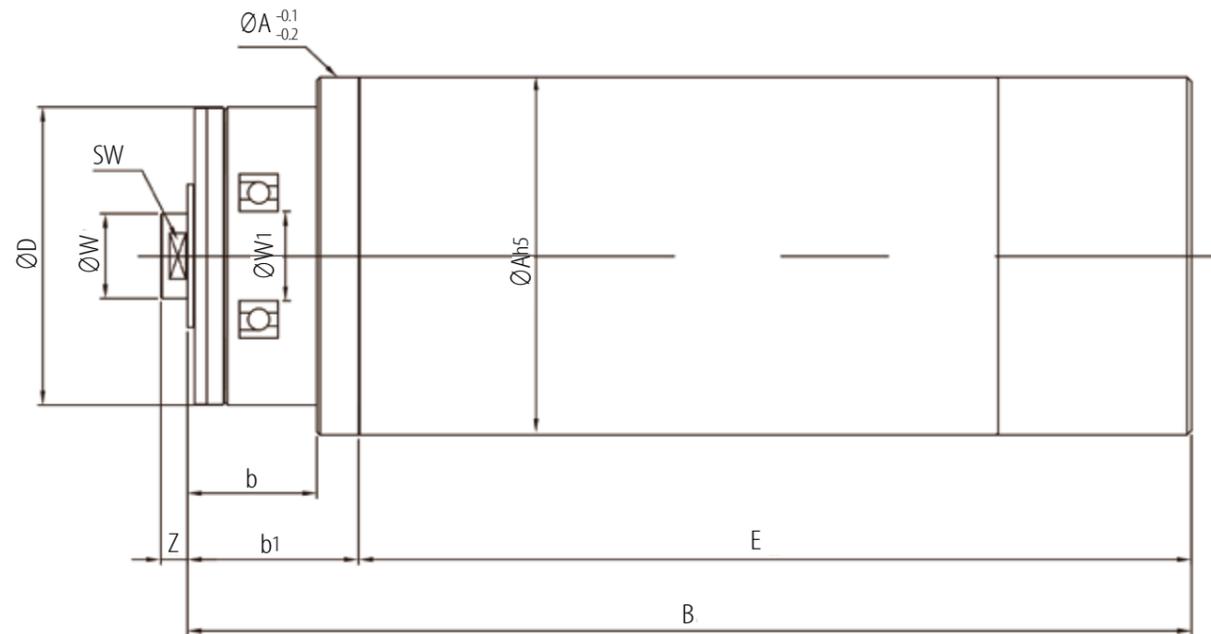


ORSKOREA offers a variety of customized solutions for spindles from the standard products.

We promise to supply you with the best quality and the best price at any time

Spindle

HIGH FREQUENCY SPINDLE MODEL : SHX(NEW MODEL)

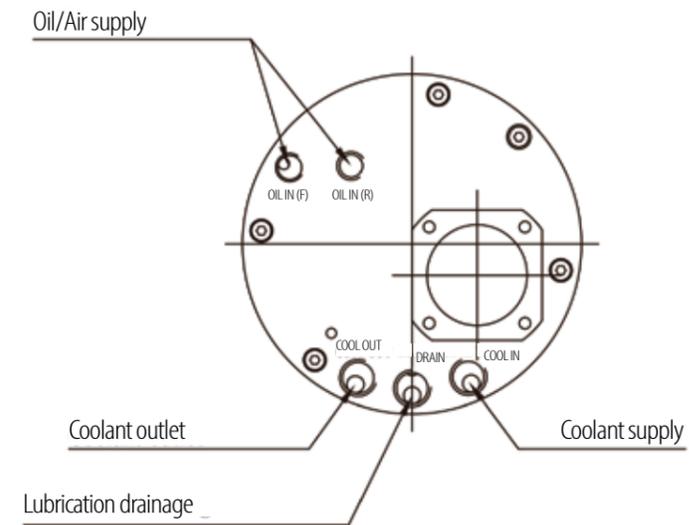
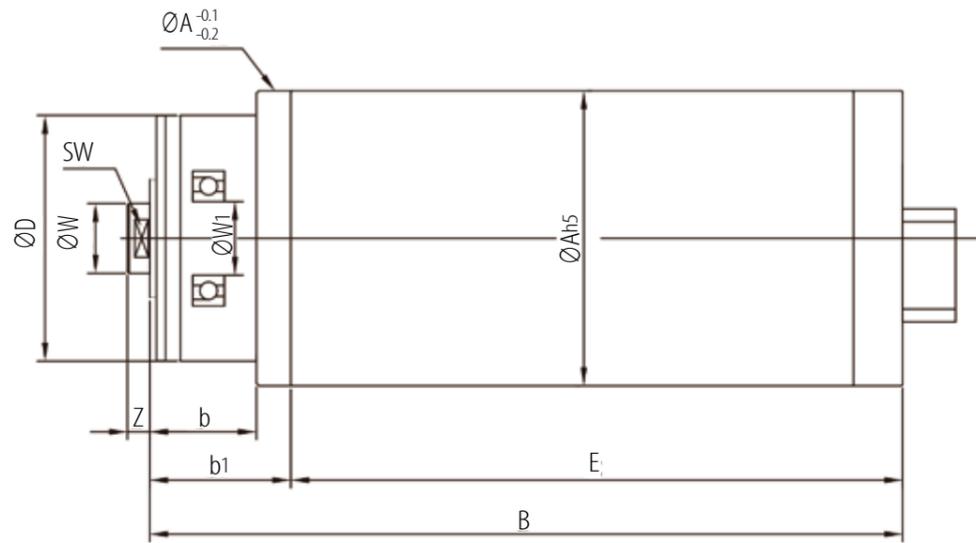


MODEL	SPEED MAX. nmax [RPM]	POWER SPECIFICATIONS NORMAL RATING					
		Torque	Output S6-60% at speed		Voltage at frequency between		
		Ms6 [NM]	Ps6 [NM]	n [RPM]	V [V]	fk [Hz]	f max [Hz]
SHX150-030/9	30000	2.7	9	30000	350/(220)	500	1000
SHX120-030/11.5	30000	4.6	11.5	24000	350/(220)	800	1000
SHX120-045/18	45000	5.7	18	30000	350/(220)	1000	1500
SHX120-060/12	60000	2.2	12	51000	350/(220)	850	1000
SHX120-075/7	75000	0.9	7	75000	350/(220)		1250
SHX120-090/3	90000	0.3	3	90000	350/(220)		1500
SHX100-105/2	105000	0.2	2	105000	350/(220)		1750
SHX100-120/1.2	120000	0.1	1.2	120000	350/(220)		2000

DIMENSION									
								Without flange	
A	B	b	D	W	W1	Z	SW	b1	E
150	341.5	47.5	100	33.5	35	9.3	30	61.5	235
120	388.5	55	119.8	53.5	55	14	48	70.5	235
120	370	54.5	120	43	45	12.5	38	70	235
120	337.5	43.5	100	28.5	30	9	24	57.5	215
120	300	38	90	23.5	25	9	20	52	183
120	324.5	27.5	70	16	17	6.5	14	42.5	14.5
100	201.5	23.5	80	16	17	6	14	31.5	145
100	191.5	23.5	80	11	12	6	8	31.5	135

Spindle

HIGH FREQUENCY SPINDLE MODEL : SHS

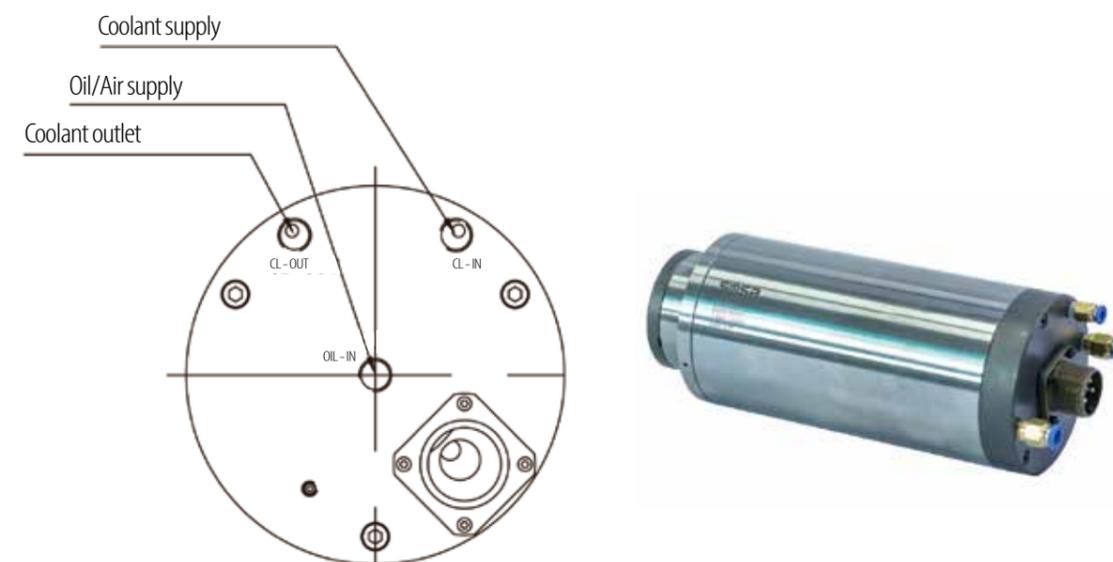
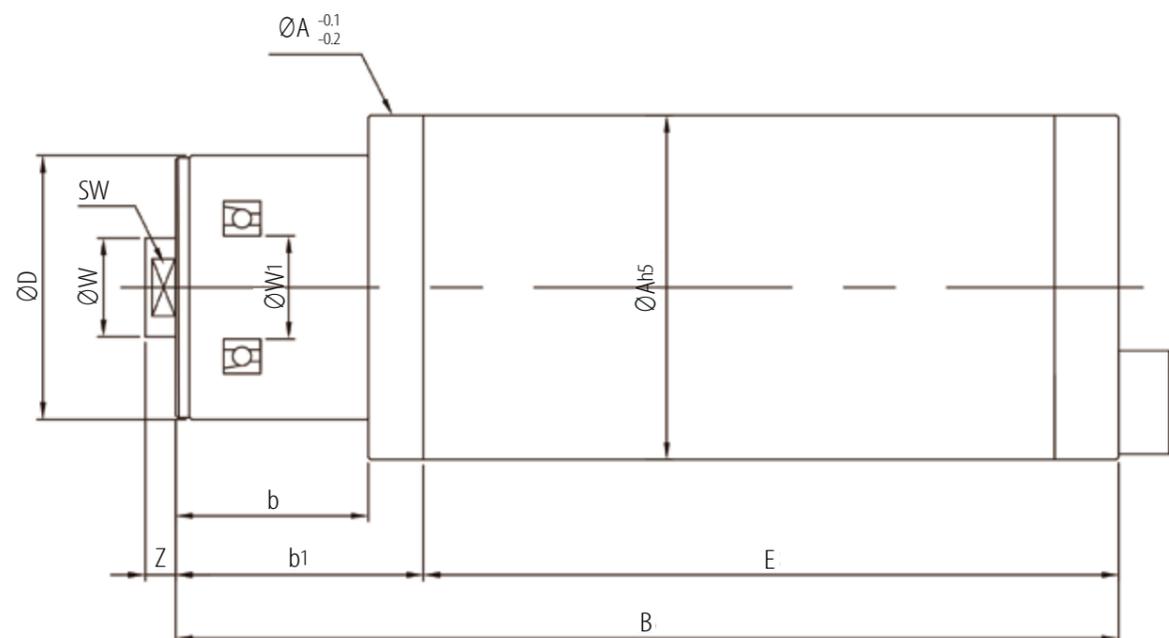


MODEL	SPEED MAX. nmax [RPM]	POWER SPECIFICATIONS NORMAL RATING					
		Torque	Output S6-60% at speed		Voltage at frequency between		
		Ms6 [NM]	Ps6 [NM]	n [RPM]	V [V]	fk [Hz]	f max [Hz]
SHS150-018/17	18000	14.8	17	11000	350/(220)	367	600
SHS150-030/16	30000	8.5	16	18000	350/(220)	600	1000
SHS150-030/23	30000	12.2	23	18000	350/(220)	600	1000
SHS120-042/12.5	42000	4.0	12.5	30000	350/(220)	1200	1400
SHS120-051/12.5	51000	4.0	12.5	30000	350/(220)	1200	1700
SHS120-060/7	60000	1.1	7	60000	350/(220)		1000
SHS100-075/5	75000	0.6	5	75000	350/(220)		1250
SHS100-090/3	90000	0.3	3	90000	350/(220)		1500

DIMENSION									
								Without flange	
A	B	b	D	W	W1	Z	SW	b1	E
150	380.5	63.5	150	63.5	65	16	55	80.5	280
150	378.5	61.5	150	53	55	14	48	78.5	280
150	378.5	61.5	130	53	55	14	48	78.5	280
120	314	51	100	38.5	40	11	32	65	229
120	306.5	43.5	100	28.5	30	9	24	57.5	229
120	262	38	90	23.5	25	9	20	52	190
100	227	38	80	18.5	20	8	16	52	155
100	242.5	36.5	80	18.5	20	8	16	48.5	154.5

Spindle

HIGH FREQUENCY SPINDLE MODEL : SHF

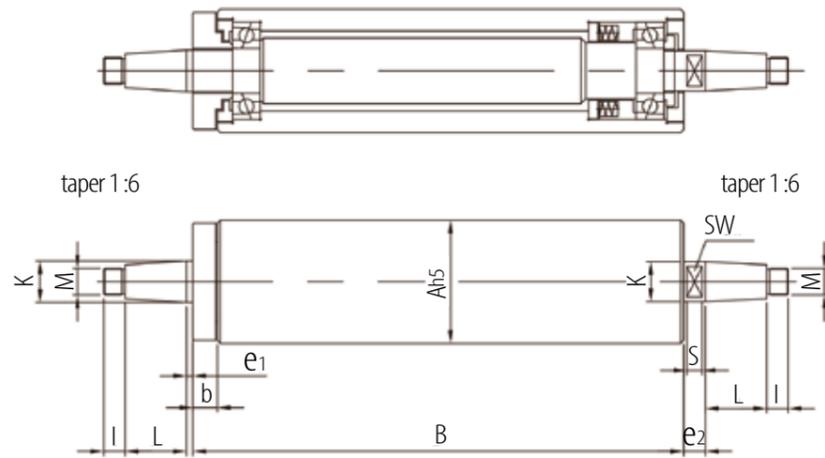


MODEL	SPEED MAX. nmax [RPM]	POWER SPECIFICATIONS NORMAL RATING					
		Torque	Output S6-60% at speed		Voltage at frequency between		
		Ms6 [NM]	Ps6 [NM]	n [RPM]	V [V]	fk [Hz]	f max [Hz]
SHF150-015/16	15000	10.2	16	15000	350/(220)		500
SHF150-015/15	18000	8.0	15	18000	350/(220)		600
SHF120-024/8	24000	3.2	8	24000	350/(220)		400
SHF120-030/7.5	30000	2.4	7.5	30000	350/(220)		500
SHF120-036/7	36000	1.9	7	36000	350/(220)		600
SHF120-042/6	42000	1.4	6	42000	350/(220)		700
SHF120-051/7	51000	1.3	7	51000	350/(220)		850
SHX120-060/4	60000	0.6	4	60000	350/(220)		1000
SHX120-075/3	75000	0.4	3	75000	350/(220)		1250

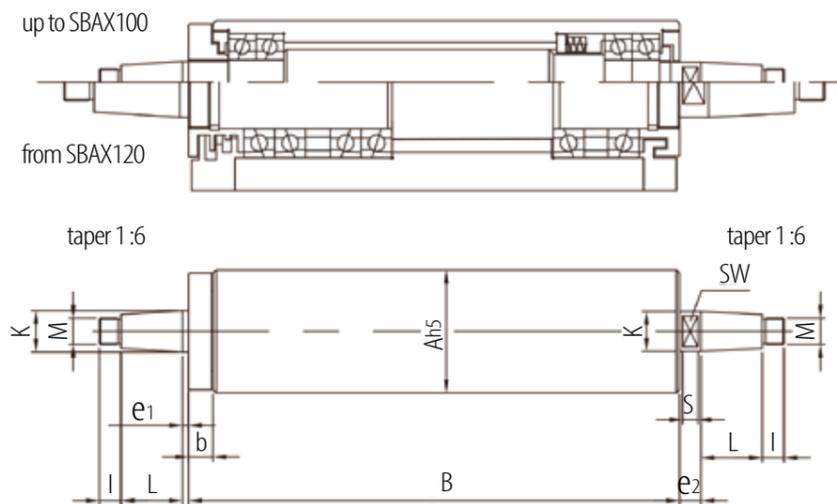
DIMENSION									
								Without flange	
A	B	b	D	W	W1	Z	SW	b1	E
150	411	84	115	43	45	13.218	36	108	275
150	411	84	115	43	45	13.218	36	108	275
120	351.5	89.5	100	38	40	11.5	32	102.5	227
120	313	70	100	28	30	10	24	84	207
120	304.5	52	84.5	23	25	9.5	19	74.5	208
120	281	52	85	23	25	9	19	66	193
120	247	52	80	18	20	8	15	62	158
120	242.2	42	75	16	17	7.5	14	52	159.2
120	212.2	35	75	14	15	7.22	13	49	132.2

Spindle

BELT SPINDLE MODEL : SBA



BELT SPINDLE MODEL : SBAX



SBA

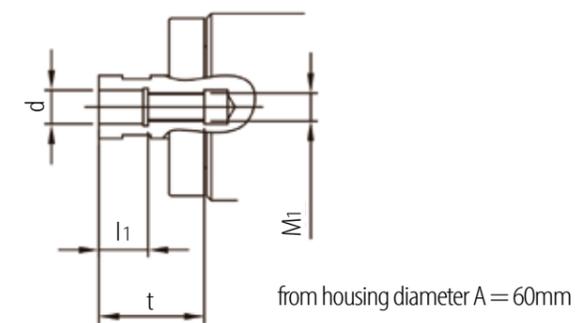
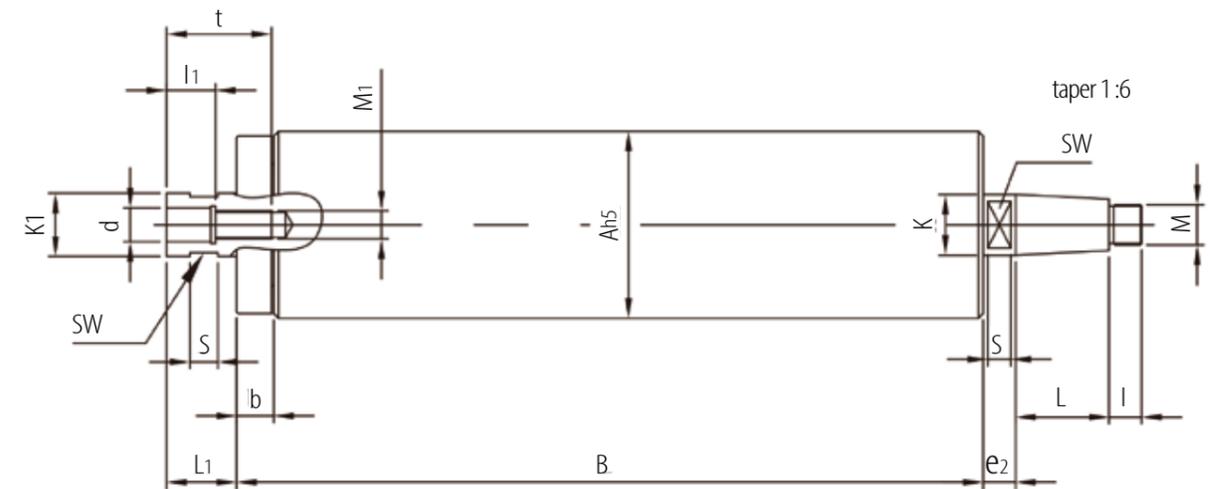
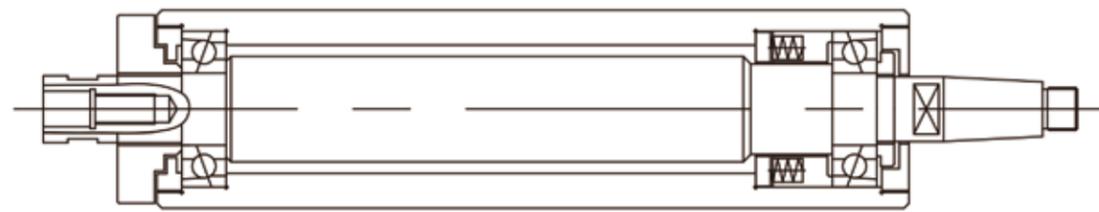
GRINDING SPINDLE	SPEED	DIMENSION										
		A × B	max	K	l	e1	e2	b	M	l	SW	S
			min-1	mm								
SBA40x	160	35000	13	20	2	7	7	M8x1	7	11	6	
	200											
	250											
SBA50x	160	29000	15.5	24	2	8	8	M10x1	8	13	6	
	200											
	250											
SBA60x	200	22000	22	34	2.5	10	8	M12x1	10	19	8	
	250											
	315											
SBA70x	200	18000	28	42	2.5	13	9	M15x1	11	24	10	
	250											
	315											
SBA80x	200	17000	33	48	3.2	16	10	M20x1	12	27	12	
	250											
	315											

SBAX

GRINDING SPINDLE	SPEED	DIMENSION										
		A × B	max	K	l	e1	e2	b	M	l	SW	S
			min-1	mm								
SBAX60x	110	20000	22	34	2.5	10	8	M12x1	10	19	8	
	200											
	250											
	315											
	400											
SBAX70x	200	18000	28	42	2.5	13	9	M15x1	11	24	10	
	250											
SBAX80x	315	15000	33	48	3.2	16	10	M20x1	12	27	12	
	400											
	500											
SBAX100x	630	12500	43	63	3.2	16	10	M25x1	14	36	14	
	315											
	400											
	500											
SBAX120x	800	10000	53	70	4	18	12	M36x1.5	18	46	16	
	400											
	500											
SBAX140x	800	8000	58	63	5	20	20	M36x1.5	20	20	18	
	400											
	500											
SBAX160x	630	7000	68	80	4	23	20	M40x1.5	20	60	20	
	400											
	500											
SBAX200x	630	6000	90	100	6	6	25	M55x1.5	25	30	10	
	500											

Spindle

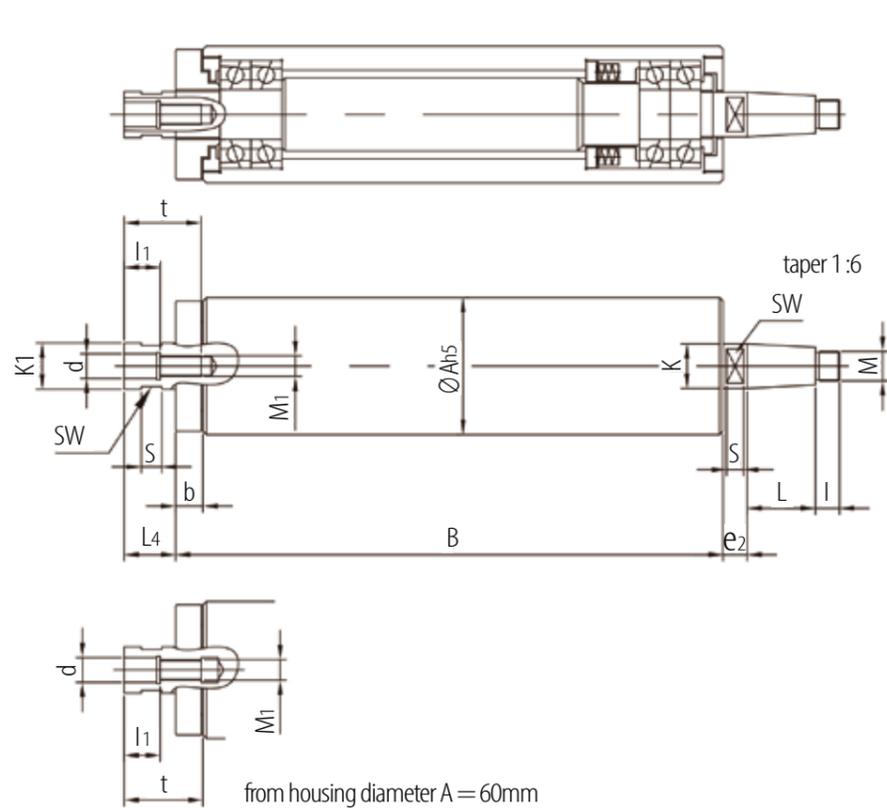
BELT SPINDLE MODEL : SBI



GRINDING SPINDLE	SPEED	DIMENSION														
		A × B	max min-1	K mm	L	K1	L2	e2	b	M	I	d	h	M1	t	SW
SBI40x	160	35000	13	20	13.5	12	7	7	M8x1	7	7.2 +0.004 / 0	10.5	M6	22	11	6
	200															
	250															
SBI50x	160	29000	15.5	24	15.5	12	7	8	M10x1	7	8.2 +0.004 / 0	12	M8	24	13	6
	200															
	250															
SBI60x	200	22000	23	34	23	16	10	8	M12x1	10	13.2 +0.004 / 0	13	M6	26	19	8
	250															
	315															
SBI70x	200	18000	28	42	28	20	13	9	M15x1	11	16.2 +0.006 / 0	16	M8	30	24	10
	250															
	315															
SBI80x	200	17000	33	48	33	25	14	10	M20x1	12	18.2 +0.006 / 0	18	M10	34	27	12
	250															

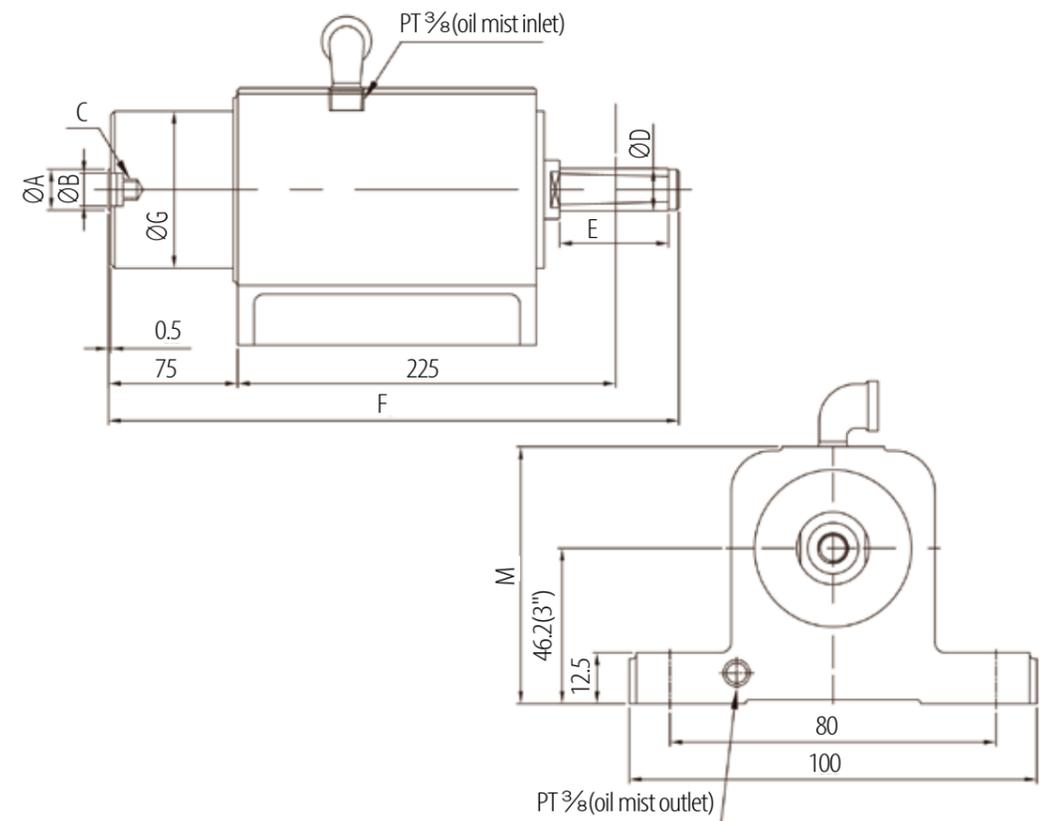
Spindle

BELT SPINDLE MODEL : SBIX



GRINDING SPINDLE A × B	SPEED max min-1	DIMENSION														
		K	L	K1	L2	e2	b	M	I	d	h	M1	t	SW	S	
SBIX60x	200	22000	23	34	23	16	10	8	M12x1	10	13.2 +0.004 0	13	M6	26	19	8
	250															
	315															
SBIX70x	400	18000	28	42	28	20	13	9	M15x1	11	16.2 +0.006 0	16	M8	30	24	10
	250															
	315															
SBIX80x	400	17000	33	48	33	25	14	10	M20x1	12	18.2 +0.006 0	18	M10	34	27	12
	250															
	315															
SBIX100x	400	13000	43	63	43	28	16	10	M25x1	14	24 +0.006 0	24	M12	42	36	14
	315															
	500															

BELT SPINDLE MODEL : SBM

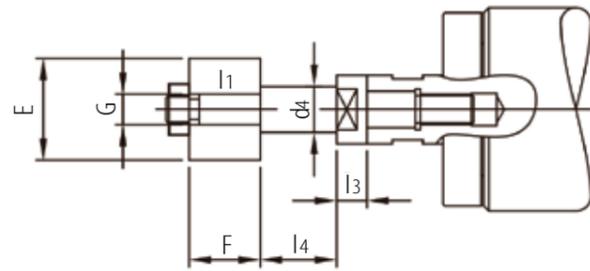


MODEL	SPEED min-1	DIMENSION											Motor pulley	
		ØA mm	ØB×Depth	C×Pitch×Depth	ØD(min)	E(max)	F	ØG	L	M	50Hz	60Hz		
SBM-018	18000	73.1	36x30.5	M30x1.5x75.5	55.7	100	357	125	135	143.7	Ø346.3	Ø288.6		
SBM-024	24000	56.6	28x22.5	M24x1.5x63.5	43.3	100	356	108	120	136.2				
SBM-030	30000	47	22x18.5	M20x1.5x54.5	36	80	345	97	120	136.2				
SBM-040	40000	35.5	18x13.5	M16x1.5x43.5	26	70	340	80	100	126.2				
SBM-050	50000	30.5	16x12.5	M14x1.5x36.5	20.8	60	334.5	77	100	126.2				
SBM-060	60000	25.5	10x9.5	M10x1.25x25.5	17.3	45	327	71	100	126.2				

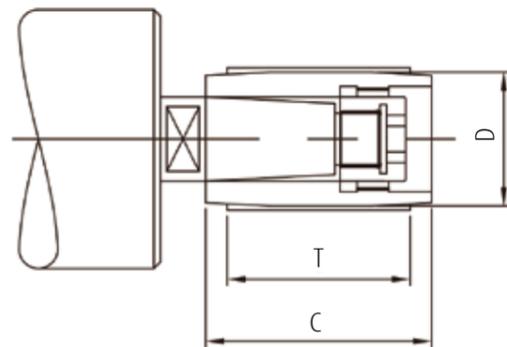
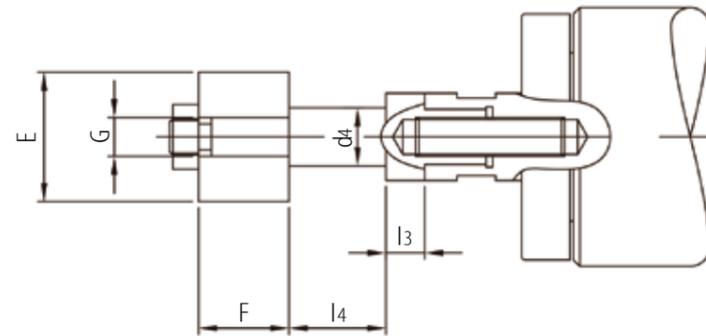
Spindle

Accessories for SBI/SBIX series

up to housing outside diameter 60mm(SZ)



from housing outside diameter 60mm(SZV)



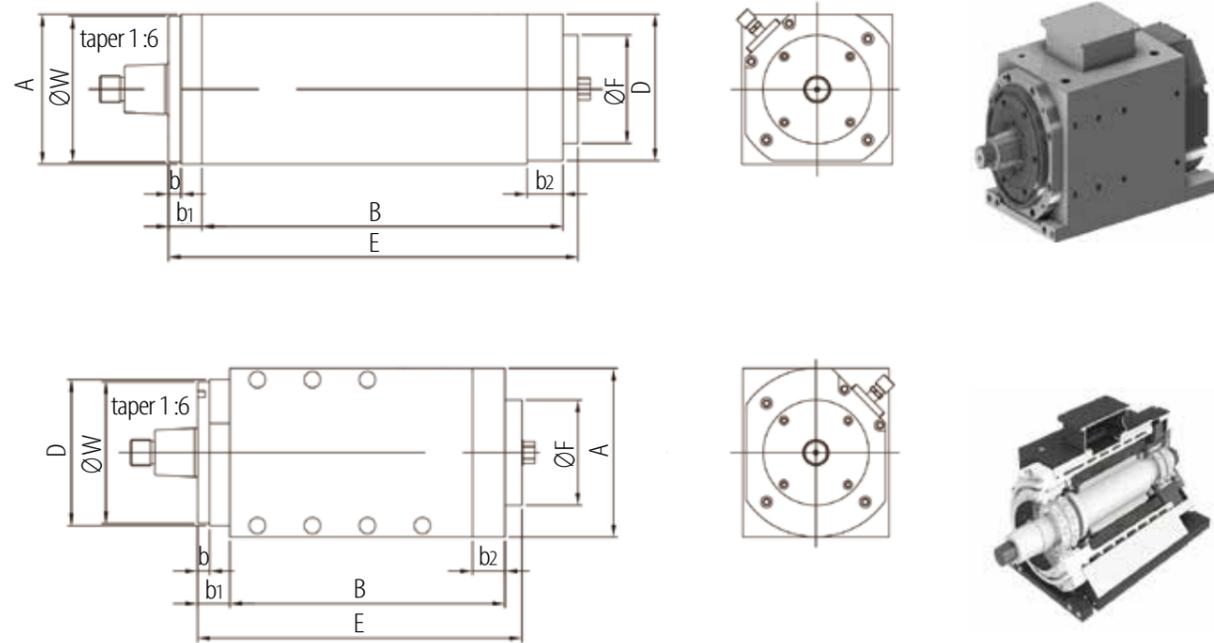
SPINDLE UNIT	SCREW-IN MANDREL			GRINDING WHEEL			RANGE OF APPLICATION		BELT PULLEY					
	Designation	d4 mm	l4	l3	E	F	G	Bore	Depth	Designation	D	C	T	Speed min-1
SBI40	SZK02-6x16	6	16	8	13	13	4	20	25	R02-28x40	28	40	32	30000
	SZ02-9x10	9	10		16	16	6	24	20					
	SZ02-9x25		25						35					25000
	SZ02-13x16	13	16	1)	20	20	6	30	34					
	SZ02-13x32		32	1)					50					
SBI50	SZ03-9x10	9	10	9	16	16	6	24	20	R02-28x50	28	50	40	25000
	SZ03-9x20		20						30					
	SZ03-12x16	12	16		20	20	6	30	40					
	SZ03-15x32		32						46					
	SZ03-15x20	15	20	1)	25	25	8	38	42					18000
SBI60 SBIX60	SZ03-15x40		40	1)					62					
	SZV05-13x16	13	16	10	25	25			32	R05-40x63	40	63	50	18000
	SZV05-13x32		32						48					
	SZV05-18x20	18	20		32	32			40					
	SZV05-18x40		40						60					
SBI70 SBIX70	SZV05-23x32	23	32	1)	40	40	13	60	68					14500
	SZV05-23x50		50	1)					86					
	SZV06-18x20	18	20	10	32	32	10	48	40	R06-45x71	45	71	60	14500
	SZV06-18x40		40						60					
	SZV06-22x32		32						54					
SBI80 SBIX80	SZV06-22x50		50						72					
	SZV06-28x40	28	40	1)	40	40	16	68	78					12500
	SZV06-28x63		63	1)					100					
	SZV07-22x32	22	32	12	40	32	13	60	54	R07-50x80	50	80	60	14000
	SZV07-22x50		50						72					
SBI80 SBIX80	SZV07-28x40	28	40		50	40	16		68					12500
	SZV07-28x63		63						90					
	SZV07-33x50	33	50	1)	50	50	20	75	95					11000
	SZV07-33x80		80	1)					125					
	SBI90 SBIX100	SZV09-28x40	28	40	15	50	40	16	68	68				
SZV09-28x63			63						90					
SZV09-33x50		33	50		50	50	20	75	95					
SZV09-33x80			80						125					
SZV09-43x63		43	63	1)	63	63	25	85	120					
SZV09-43x100		100	1)					160						

1)These screw-in mandrels are not stepped

Drive : Motor speed 2860 min-1
Motor belt pulley Ø 220mm

Spindle

BUILT IN MOTOR SPINDLES



HYDRO-STATIC/ DYNAMIC SPINDLES

- Designing and manufacturing Hydro Dynamic / Static Grinding Spindles.
- Repairing and/or modifying Hydro-Dynamic / Static Spindles of the leading brands. This includes TOYO, KOYO, ISMUI, OKUMA, LIDKOPING and many more for the domestic market.
- ORSKOREA is the holders of patents on Air-Floating High-Frequency Spindle. (A joint ownership with Schaeffler Korea)
- OEM/ODM partnership with machine manufacturers.



ROLLING BEARING TYPE SPINDLES

MODEL	SPEED MAX	POWER SPECIFICATIONS					DIMENSION								
		Torque			voltage at frequency		A	B	b	b1	b2	D	E	F	W
	Ms6	Ps6	n	V	f max										
[RPM]	[NM]	[kW]	[RPM]	[V]	[Hz]										
SRG500-2X	2000	38.2	8	2000	350/ (220)	1200	180	434	15	40	43	176	492	130	175
SRG500-2YZ							208	340	15	40	40	180	401	130	175

- Repairing and manufacturing all types of high-end spindles.
- Designing and manufacturing of centerless grinding spindles equipped with high-precision bearings.
- Repairing and refurbishing various types of machine and high-precision spindles.
- Designing and developing customized spindles.
- OEM/ODM partnership with machine manufactures.



Service & Support

Repair Service

Check & Disassemble

- Check for internal and external damages that occurred from use
- Disassembly - each step is photographed and analyzed in detail
- Each part is inspected and analyzed to determine if a replacement is needed or if it can be repaired
- Quotation will be provided for the client's approval

Repair Service

- Cleaning the disassembled parts (by hand with ultrasonic wave and anti-rust chemicals)
- Purchasing of parts (bearings and/or other necessary parts)
- Refurbishing and/or other required process
- Design and manufacture damaged parts (Done by qualified ORSKOREA's members from design and manufacturing team)
- Balancing of the parts including the shaft (balancing grade 1G or below based on ISO standard)
- Equipment used in the process: SCHENCK & SHIMATSU B.M brands
- Assembly and inspection (bearing is assembled according to appropriate preload level)

Precision Test & Trial Operation

- Accuracy test and test run are performed before delivery
- Static precision test (run-out check)
- No-load test (minimum of 6 hours)
- Test run (check for bearings noise level and vibration using German SCHENCK equipment)
- Additional processing if balancing operation is needed
- Test run report will be provided including all data and work history
- Anti-rust control and air sealed packaging for delivery



Service & Support

Support

ORSKOREA
understands
the importance of
quality service.
Wherever you are,
we will be there.

After-sales & Service

After-sales service is considered with utmost importance and priority. Immediate attention is therefore given to all requests for service and spare parts. With our network of logistics partners located all around the globe, the parts will be delivered in the shortest time possible. If service is needed, our service engineers are sent out on request to operating sites around the globe. All inquiries will be responded within 24 hours and a schedule will be made for needed service.



GRINDING MACHINES AND SPINDLE MANUFACTURING FACILITY

Address: 184, Jayumuyeok 3-gil, Masanhoewon-gu,
Changwon-si, Gyeongsangnam-do, Building No. 5
(1st and 2nd floor) 51340, REPUBLIC OF KOREA

Phone: +82-55-716-2876

Fax: +82-505-719-2876

ISTANBUL

Address: Safa Mah. Atatürk Caddesi No:385 Yenidoğan
/Sancaktepe 34791 İstanbul - TURKEY

Phone: +90-216-484-69-00

Fax: +90-216-484-69-06

HEAD OFFICE

Address: Eskişehir Yolu 294, 06800 Lodumlu, Ankara - TURKEY

Phone: +90-312-289-8900

Fax: +90-312-284-6253

ORS BEARINGS USA

Address: 14230 Lochridge Boulevard, Suites F-H, Covington
GA 30014 - USA

Phone: +1-770-385-67-23

Toll Free: +1-888-830-6723

Fax: +1-770-385-63-09

IZMIR

Address: 7093/3 Sokak No:6 Pınarbaşı 35060 İzmir - TURKEY

Phone: +90-232-479-40-90

Fax: +90-232-479-93-63



HEADQUARTERS BEARINGS AND AUTOMOBILE PARTS MANUFACTURING FACILITY

Address: İstiklal Mahallesi Hacı Bayram Veli Bulvarı

No:76/A, Polatlı, Ankara - TURKEY

Phone: +90-312-648-0010

Fax: +90-312-648-0021