



ORS  
KOREA

“The world rotates with us”



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# High Precision Spindles

High Precision, High Frequency Spindles design and manufacturing is not possible without the Highest Quality Bearings. ORSKOREA applies unique mechanisms and the highest quality bearings to manufacture our High Frequency Spindles. Our spindles reach speeds of up to 120,000 rpm. We are proud to say that this is the Highest Speed Spindle that is manufactured in Korea.

Belt design precision spindles and High Frequency Spindles that can operate at High Speed and different speed settings. Large Capacity Built-in Motor Spindles to Hydro-dynamic (static) spindles. ORS BEARINGS, with nearly 30 years of experience in the Bearing Industry. Combined with ORSKOREA'S experience of machine and spindle manufacturing for nearly 2 decades. We are providing high quality grind machines and spindles to the world of engineering.



## ORSKOREA's Grinding Machines & Spindles

# ORSKOREA is the best choice for spindles.

01

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

02

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 are able to understand the machine operators and engineers alike.

03

In order to ensure the highest output and durability, we use hybrid ceramic angular bearings from Germany for our spindles. We always provide our clients with the highest DMN standard products.

05

To reduce vibration, we engineered and built our spindles with VPT (Vibration Prevention Technology) to completely prevent the weight from being unbalanced. This process is done by Static and Dynamic Balancing.

07

ORSKOREA is a holder of a diverse spindle patent portfolio. We currently have five patents for high-frequency motor spindles. We apply for patents annually.

09

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



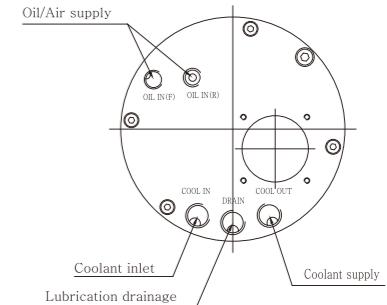
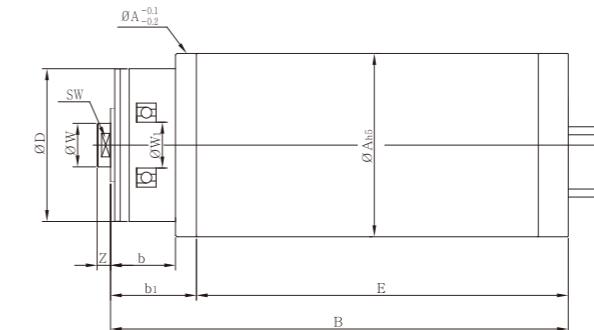
08

Applying extensive innovative ideas and with experience in spindles manufacturing, we continuously invest in research and development to further expand our knowledge in the production of spindles.

10

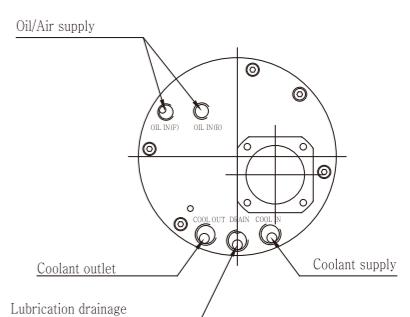
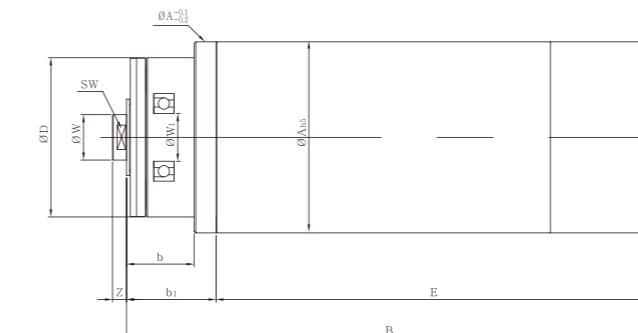
ORSKOREA is a reliable partner for your spindle requirements. From Built-in (HF) motor spindles, Hydro-Static/ Dynamic spindles to Belt-Driven spindles and more. ORSKOREA is your spindle solution.

## High Frequency Spindles Model : SHS



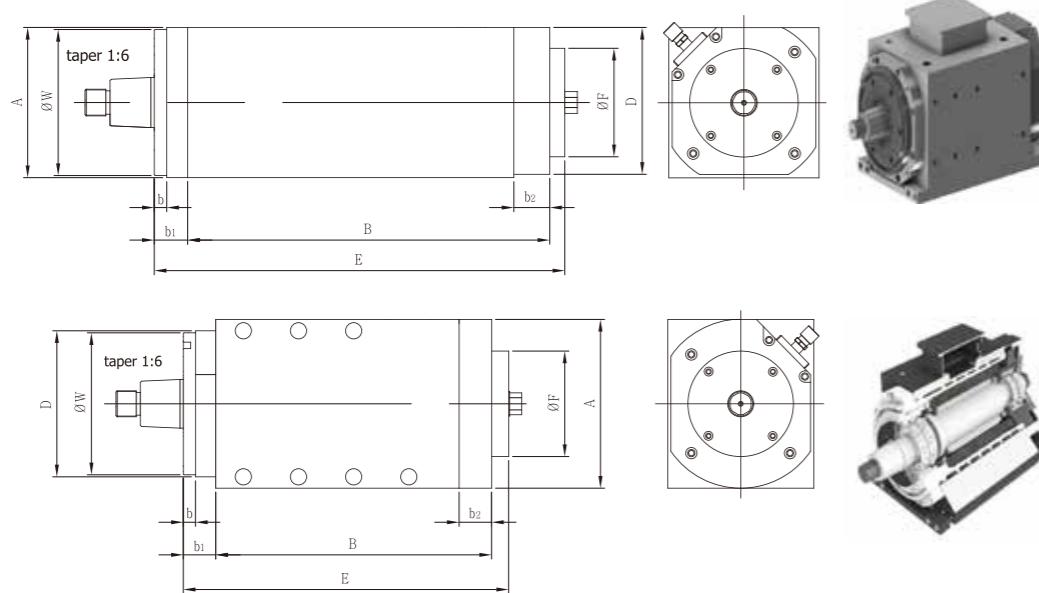
Model	SPEED MAX.	POWER SPECIFICATIONS							DIMENSION								Without flange	
		Torque	Output 56-60% at speed		Voltage at frequency between				A	B	b	D	W	W1	Z	SW	b1	E
N <sub>max</sub> [RPM]	M <sub>s6</sub> [NM]	P <sub>s6</sub> [kW]	n [RPM]	V [V]	f <sub>k</sub> [Hz]	f <sub>max</sub> [Hz]												Without flange
SHS15-18/17	18000	14.8	17	11000	350/(220)	367	600	150	380.5	63.5	150	63.5	65	16	55	80.5	280	
SHS15-30/16	30000	8.5	16	18000	350/(220)	600	1000	150	378.5	61.5	130	53	55	14	48	78.5	280	
SHS15-30/23	30000	12.2	23	18000	350/(220)	600	1000	150	378.5	61.5	130	53	55	14	48	78.5	280	
SHS12-42/12.5	42000	4.0	12.5	30000	350/(220)	1200	1400	120	314	51	100	38.5	40	11	32	65	229	
SHS12-51/12.5	51000	4.0	12.5	30000	350/(220)	1200	1700	120	306.5	43.5	100	28.5	30	9	24	57.5	229	
SHS12-60/7	60000	1.1	7	60000	350/(220)	1000		120	262	38	90	23.5	25	9	20	52	190	
SHS10-75/5	75000	0.6	5	75000	350/(220)	1250		100	227	38	80	18.5	20	8	16	52	155	
SHS10-90/3	90000	0.3	3	90000	350/(220)	1500		100	242.5	36.5	80	18.5	20	8	16	48.5	154.5	

## High Frequency Spindles Model : SHX(New Model)



Model	SPEED MAX.	POWER SPECIFICATIONS							DIMENSION								Without flange	
		Torque	Output 56-60% at speed		Voltage at frequency between				A	B	b	D	W	W1	Z	SW	b1	E
N <sub>max</sub> [RPM]	M <sub>s6</sub> [NM]	P <sub>s6</sub> [kW]	n [RPM]	V [V]	f <sub>k</sub> [Hz]	f <sub>max</sub> [Hz]												Without flange
SHX 15-30/9	30000	2.7	9	30000	350/(220)	500	1000	120	341.5	47.5	100	33.5	35	9.3	30	61.5	235	
SHX12-30/11.5	3000	4.6	11.5	24000	350/(220)	800	1000	120	388.5	55	119.8	53.5	55	14	48	70.5	253	
SHX12-45/18	45000	5.7	18	30000	350/(220)	1000	1500	120	370	54.5	120	43	45	12.5	38	70	235	
SHX12-60/12	60000	2.2	12	51000	350/(220)	850	1000	120	337.5	43.5	100	28.5	30	9	24	57.5	215	
SHX12-75/7	75000	0.9	7	75000	350/(220)	1250		120	300	38	90	23.5	25	9	20	52	183	
SHX12-90/3	90000	0.3	3	90000	350/(220)	1500		120	324.5	27.5	70	16	17	6.5	14	42.5	145	
SHX10-105/2	105000	0.2	2	105000	350/(220)	1750		100	201.5	23.5	80	16	17	6	14	31.5	145	
SHX10-120/1.2	120000	0.1	1.2	120000	350/(220)	2000		100	191.5	23.5	80	11	12	6	8	31.5	135	

## Built in Motor Spindles



Model	SPEED MAX.	POWER SPECIFICATIONS					DIMENSION									
		Torque	M <sub>s6</sub>	P <sub>s6</sub>	n	V	f <sub>max</sub>	A	B	b	b <sub>1</sub>	b <sub>2</sub>	D	E	F	W
		N <sub>max</sub> [RPM]	[NM]	[kW]	[RPM]	[V]	[Hz]	180	434	15	40	43	176	492	130	175
SRG500-2X	2000	38.2	8	2000	350/(220)	1200		180	434	15	40	43	176	492	130	175
SRG500-2YZ					208	340		208	340	15	40	40	180	401	130	175

## Hydro-Static / Dynamic Spindles

- Designing and manufacturing of Hydro Dynamic / Static Grinding Spindles.
- Repairing and/or modifying of 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 partnership with machine manufacturers.



## Rolling Bearing Type Spindles

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



## Repair Service

### Check & Disassemble

- Check for internal and external damages that occurred from use
- Disassemble - 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 of the disassembled parts (by hand with ultrasonic wave and anti-rust chemicals)
- Purchasing of parts (bearings and/or other necessary parts)
- Refurbishing and necessary process as needed
- Design and manufacture of 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's use 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
- Rust control and air sealed packaging for delivery



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



## Service and Support

### 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.



### ORS KOREA 오알에스코리아

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