



Planetary Gearbox

Helical Gear



LSIS's premium technology makes the difference.

Best-in-class Quality, High Precision, Low Noise Level



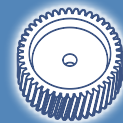
Helical Gear



Cylindrical Housing



One Body Carrier



Nano unit Plasma Nitriding

LSIS

Model and Type

HSS

Series
HSS: Standard
HSR: Round
HSW: Weight
HSD: Direct Flange

045

Stage/Input Shaft Hole
1A: Standard Single Stage
2B: Standard Double Stage
2A: Optional Double Stage

[Customized Order]
1M: Customized Single Stage
(expanded input hole)
2M: Customized Single Stage
(expanded input hole)

1A

Gear Ratio
Single Stage: 3~10
Double Stage: 15~100

003

Backlash
S: Standard
P: Premium
A: Advanced

K

Key Type
K: Key
N: No Key

S

Key Type
K: Key
N: No Key

MOTOR

Gearbox Size Manager

Size Manager recommends
the appropriate gearbox from
the selected motor!
www.lsis.com/gearbox

Series	Size						
	①	②	③	④	⑤	⑥	⑦
HSS	045	060	090	115	142	180*	220*
HSR	050	070	090	120	155	205*	235*
HSW	045	060	075	100	140	180*	220*
HSD	047	064	090	110	140	200*	

* Straight type only

Comparison Table

LSIS	A Co. (Taiwan)	L Co. (Taiwan)	S Co. (Taiwan)	S Co. (Japan)	S Co. (South Korea)	A Co. (Germany)	N Co. (Germany)
HSS	AB	KSB	PGH, PHL	VRB	SPIH	(SP)	(PLN)
HSR	AE	KSE	—	VRL	—	LP	—
HSW	AF	KSF	—	VRS	—	SP	(PLN)
HSD	AD	KSD	PHF	VRT	SPIFH	TP	(PSFN), (PLFN)

※ () products need prior verification due to different sizes.

Specification

Division			Stage	Gear Ratio*	①	②	③	④	⑤	⑥	⑦	
Straight	Backlash (arcmin)	S	1	3~10	≤ 7	≤ 7	≤ 7	≤ 7	≤ 7	≤ 7	≤ 7	
			2	15~100	≤ 9	≤ 9	≤ 9	≤ 9	≤ 9	≤ 9		
		P	1	3~10	≤ 5	≤ 5	≤ 5	≤ 5	≤ 5	≤ 5	≤ 5	
			2	15~100	≤ 7	≤ 7	≤ 7	≤ 7	≤ 7	≤ 7	≤ 7	
		A	1	3~10	≤ 3	≤ 3	≤ 3	≤ 3	≤ 3	≤ 3	≤ 3	
			2	15~100	≤ 5	≤ 5	≤ 5	≤ 5	≤ 5	≤ 5	≤ 5	
	Service Life (hrs)		1,2	3~100	20,000 (For continuous operation, the service life is less than 10,000 hrs.)							
	Efficiency (%)		1	3~10	≥ 97							
			2	15~100	≥ 94							
	Operating Temp. (°C)		1,2	3~100	-10 ~ 90							
	Lubrication		1,2	3~100	Grease (VIGO Grease RE #0)							
	Protection Level		1,2	3~100	IP65							
	Noise (dB)		1,2	3~100	≤ 52	≤ 54	≤ 56	≤ 59	≤ 62	≤ 64	≤ 66	
Angular	Backlash (arcmin)	S	1	3~20	≤ 8	≤ 8	≤ 8	≤ 8	≤ 8	—		
			2	25~200	≤ 11	≤ 11	≤ 11	≤ 11	≤ 11			
		P	1	3~20	≤ 6	≤ 6	≤ 6	≤ 6	≤ 6			
			2	25~200	≤ 9	≤ 9	≤ 9	≤ 9	≤ 9			
		A	1	3~20	≤ 4	≤ 4	≤ 4	≤ 4	≤ 4			
			2	25~200	≤ 7	≤ 7	≤ 7	≤ 7	≤ 7			
	Service Life (hrs)		1,2	3~200	20,000 (For continuous operation, the service life is less than 10,000 hrs.)							
	Efficiency (%)		1	3~20	≥ 95							
			2	25~200	≥ 92							
	Operating Temp. (°C)		1,2	3~200	-10 ~ 90							
	Lubrication		1,2	3~200	Grease (VIGO Grease RE #0)							
	Protection Level		1,2	3~200	IP65							
	Noise (dB)		1,2	3~200	≤ 58	≤ 60	≤ 63	≤ 66	≤ 69			

* For ① size angular gearbox, the gear ratio at single stage is 3 ~ 10, and double stage is 15 ~ 100.