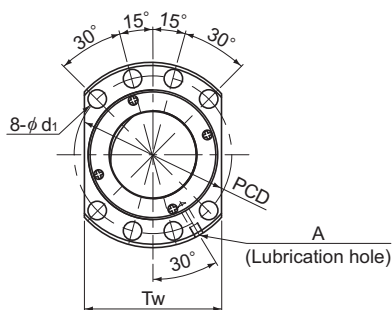


SDA-V/SDA-VZ With Preload/No Preload

DN value	SDA-V (Caged Ball)	160000
	SDA-VZ (Full-Ball)	130000

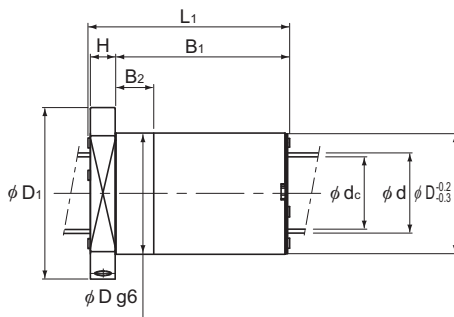


Model No.	Screw shaft outer diameter d	Lead Ph	Ball center-to-center diameter dp	Screw shaft thread minor diameter dc	No. of loaded circuits Rows X turns	Basic load rating				Rigidity	
						SDA-V (Caged Ball)		SDA-VZ (Full-Ball)		SDA-V (Caged Ball)	SDA-VZ (Full-Ball)
						Ca kN	C _{0a} kN	Ca kN	C _{0a} kN	K N/μm	K N/μm
SDA 4510V-5	45	10	46	39.4	1×5	68.7	139.4	65.4	146.5	717	749
SDA 4510VA-5	45	10	46.75	40.2	1×5	69.2	142.2	65.9	149	729	759
SDA 4512V-5	45	12	46	39.4	1×5	68.6	139.4	65.4	146.7	717	750
SDA 4512VA-5	45	12	46.75	40.2	1×5	69.2	142.2	65.9	149.2	728	760
SDA 4516V-5	45	16	46	39.4	1×5	68.5	140.7	65.3	147	722	751
SDA 4516VA-5	45	16	46.75	40.2	1×5	69	142.2	65.8	149.5	727	761
SDA 4520V-5	45	20	46	39.4	1×5	68.4	140.7	65.1	147.5	721	752
SDA 4520VA-5	45	20	46.75	40.2	1×5	68.9	143.6	65.6	150	733	762
SDA 4520VA-10	45	20	46.75	40.2	2×5	125.1	285.8	119.1	300.1	1413	1475
SDA 4525V-4	45	25	46	39.4	1×4	55.5	104	52.8	109.8	572	600
SDA 4525VA-4	45	25	46.75	40.2	1×4	55.9	106.7	53.2	111.6	584	608
SDA 4530V-4	45	30	46	39.4	1×4	55.2	105.3	52.6	110.5	577	602
SDA 4530VA-4	45	30	46.75	40.2	1×4	55.7	106.7	53	112.3	583	610
SDA 4540V-3	45	40	46	39.4	1×3	41.7	78.3	39.7	81.9	431	449
SDA 4540VA-3	45	40	46.75	40.2	1×3	42.1	79.7	40.1	83.2	438	455

Model number coding

SDA4510V	Z	-5	TT	G0	+830L	C5
Model No.	Full-ball type code (No code for caged ball type)	Number of turns	Contamination protection accessory symbol (*1)	Axial direction clearance code (*2) (Preloaded products: GO Clearance, Non-preloaded products: GT Clearance)	Overall screw shaft length (in mm)	Accuracy symbol (*3)
(*1) See A15-334 . (*2) See A15-19 . (*3) See A15-12 .						

Positioning, ISO 3408 compliant



Unit: mm

	Nut dimensions										Screw shaft inertial moment/mm	Nut mass	Shaft mass	Permissible rotational speed				
	Outer diameter	Flange diameter	Overall length	H	B ₁	B ₂	PCD	d _i	T _w	Lubrication hole				kg·m ² /mm	kg	kg/m	SDA-V (Caged Ball)	SDA-VZ (Full-Ball)
																	D	D ₁
70	105	65	16	48	20	88	11	80	M8×1	3.16×10 ⁻⁶	1.35	11.16	3470	2820				
75	110	65	16	48	20	93	11	85	M8×1	3.16×10 ⁻⁶	1.62	11.4	3420	2780				
70	105	74	16	57	20	88	11	80	M8×1	3.16×10 ⁻⁶	1.5	11.38	3470	2820				
75	110	74	16	57	20	93	11	85	M8×1	3.16×10 ⁻⁶	1.81	11.58	3420	2780				
70	105	93	16	76	20	88	11	80	M8×1	3.16×10 ⁻⁶	1.81	11.67	3470	2820				
75	110	93	16	76	20	93	11	85	M8×1	3.16×10 ⁻⁶	2.19	11.82	3420	2780				
70	105	112	16	95	20	88	11	80	M8×1	3.16×10 ⁻⁶	2.11	11.84	3470	2820				
75	110	112	16	95	20	93	11	85	M8×1	3.16×10 ⁻⁶	2.57	11.96	3420	2780				
75	110	112	16	95	20	93	11	85	M8×1	3.16×10 ⁻⁶	2.56	11.28	3420	2780				
70	105	110	16	93	20	88	11	80	M8×1	3.16×10 ⁻⁶	2.04	11.95	3470	2820				
75	110	110	16	93	20	93	11	85	M8×1	3.16×10 ⁻⁶	2.51	12.06	3420	2780				
70	105	130	16	113	20	88	11	80	M8×1	3.16×10 ⁻⁶	2.36	12.04	3470	2820				
75	110	131	16	114	20	93	11	85	M8×1	3.16×10 ⁻⁶	2.91	12.14	3420	2780				
70	105	129	16	112	20	88	11	80	M8×1	3.16×10 ⁻⁶	2.33	12.16	3470	2820				
75	110	129	16	112	20	93	11	85	M8×1	3.16×10 ⁻⁶	2.86	12.23	3420	2780				

Axial Clearance

Unit: mm

Clearance symbol	G0	GT
Axial clearance	0 or less	0 to 0.005

Note) The overall length of the nut will increase when equipping the QZ lubricating device. See **A15-344** for further details.
It is not possible to chamfer both ends of the screw shaft. When designing your system this way, contact THK.

The rigidity values (K) in the table represent spring constants, each obtained from the load and the elastic deformation under an axial load equal to 30% of the basic axial dynamic load rating (Ca).

These values do not include the rigidity of the components related to mounting the ball screw nut. Therefore, it is normally appropriate to regard roughly 80% of the rigidity value (K) in the table as the actual value.

If the axial load (Fa) is not 0.3 Ca, the rigidity value (K_n) is obtained from the following equation.

$$K_n = K \left(\frac{F_a}{0.3C_a} \right)^3$$

K: Rigidity value in the dimensional table