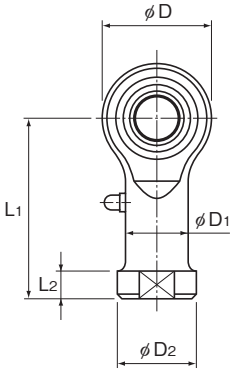
Model PHS (Female Threading Type)



Model No.	Outer dimensions			Threaded	Holder Dimensions			
	Length L	Diameter D	Width B_1 0 –0.1	S_1 JIS Class 2	W 0 –0.2	D_1	D_2	B ±0.1
PHS 5	35	16	8	M5×0.8	9	9	11	6
PHS 6	39	18	9	M6×1	11	10	13	6.75
PHS 8	47	22	12	M8×1.25	14	12.5	16	9
PHS 10	56	26	14	M10×1.5	17	15	19	10.5
PHS 12	65	30	16	M12×1.75	19	17.5	22	12
PHS 14	74	34	19	M14×2	22	20	25	13.5
PHS 16	83	38	21	M16×2	22	22	27	15
PHS 18	92	42	23	M18×1.5	27	25	31	16.5
PHS 20	100	46	25	M20×1.5	30	27.5	34	18
PHS 22	109	50	28	M22×1.5	32	30	37	20
PHS 25	124	60	31	M24×2	36	33.5	42	22
PHS 30	145	70	37	M30×2	41	40	50	25

[Material]

Holder : S35C (Chromate treatment)
Spherical inner ring : SUJ2, 58 HRC or higher
(Hard chrome plated except for the inner surface of the inner ring)
Bush : copper alloy

[Fitting with the Shaft]

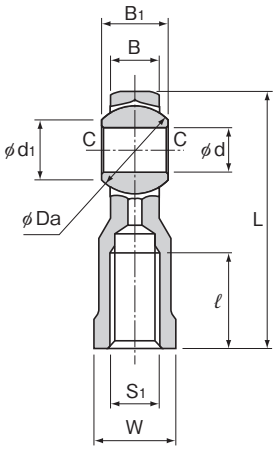
Condition	Dimensional tolerance of the shaft
Normal load	h7
Indeterminate load	p6

Model number coding

PHS10 L

Model number

Left-hand thread



Unit: mm

				Grease nipple	Spherical inner ring dimensions				Permissible tilt angles			Static applied load Radial	Mass
	L_1	L_2	ℓ		d H7	Ball diameter Da mm (inch)	d_1	C	α_1°	α_2°	α_3°	C_s N	g
	27	4	14	PB107	5	11.112($^7/_{16}$)	7.7	0.3	8	13	30	5590	16.5
	30	5	14		6	12.7($^1/_2$)	9	0.3	8	13	30	6860	25
	36	5	17		8	15.875($^5/_8$)	10.4	0.5	8	14	25	9800	43
	43	6.5	21		10	19.05($^3/_4$)	12.9	0.5	8	14	25	13200	72
	50	6.5	24		12	22.225($^7/_8$)	15.4	0.5	8	13	25	16700	107
	57	8	27		14	25.4(1)	16.9	0.7	10	16	24	20600	160
	64	8	33		16	28.575(1$^1/_8$)	19.4	0.7	9	15	24	25000	210
	71	10	36		18	31.75(1$^1/_4$)	21.9	0.7	9	15	24	29400	295
	77	10	40		20	34.925(1$^3/_8$)	24.4	0.7	9	15	24	34300	380
	84	12	43		22	38.1(1$^1/_2$)	25.8	0.7	10	15	23	41200	490
	94	12	48	A-M6F	25	42.862(1$^{11}/_{16}$)	29.6	0.8	9	15	23	72500	750
	110	15	56		30	50.8(2)	34.8	0.8	10	17	23	92200	1130

[Clearance]

Unit: mm

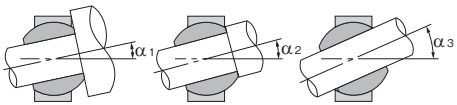
Radial clearance	0.035 or less
Axial clearance	0.1 or less

[Lubrication]

Apply lubricant before using the product. The holder has a lubrication hole and an oil groove; they allow grease to be replenished through the grease nipple as necessary.

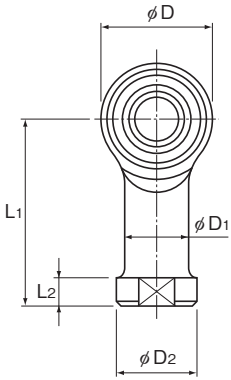
[Identification of Left-hand Thread]

If the female threading is left-hand, symbol “L” is added. The actual product is marked with symbol “L” on the holder.



Permissible Tilt Angles

Model NHS-T (No Lubrication Type)



Model No.	Outer dimensions			Threaded	Holder Dimensions			
	Length L	Diameter D	Width B_1 0 –0.1	S_1 JIS Class 2	W 0 –0.2	D_1	D_2	B +0.1 –0.4
NHS 3T	27	12	6	M3×0.5	7	6.5	8	4.5
NHS 4T	31	14	7	M4×0.7	8	8	9.5	5.3
NHS 5T	35	16	8	M5×0.8	9	9	11	6
NHS 6T	39	18	9	M6×1	11	10	13	6.75
NHS 8T	47	22	12	M8×1.25	14	12.5	16	9
NHS 10T	56	26	14	M10×1.5	17	15	19	10.5
NHS 12T	65	30	16	M12×1.75	19	17.5	22	12
NHS 14T	74	34	19	M14×2	22	20	25	13.5
NHS 16T	83	38	21	M16×2	22	22	27	15
NHS 18T	92	42	23	M18×1.5	27	25	31	16.5
NHS 20T	100	46	25	M20×1.5	30	27.5	34	18
NHS 22T	109	50	28	M22×1.5	32	30	37	20

[Material]

Holder : S35C (Chromate treatment)
For NHS3T and NHS4T, S20C
Spherical inner ring : SUJ2, 58 HRC or higher
(Hard chrome plated except for the inner surface of the inner ring)
Bush : Self-lubricating synthetic resin

[Fitting with the Shaft]

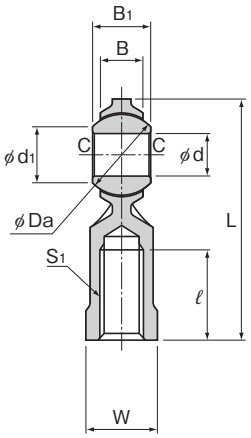
Condition	Dimensional tolerance of the shaft
Normal load	h7
Indeterminate load	p6

Model number coding

NHS10T L

Model number

Left-hand thread



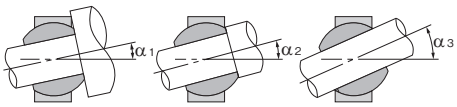
Unit: mm

				Spherical inner ring dimensions				Permissible tilt angles			Static applied load Radial	Mass
	L_1	L_2	ℓ	d H7	Ball diameter Da mm (inch)	d_1	C	α_1°	α_2°	α_3°	C_s N	g
	21	3	10	3	9.525(3/8)	7.4	0.3	8	10	42	1570	6.5
	24	4	12	4	10.319(13/32)	7.6	0.3	9	11	35	2250	10
	27	4	14	5	11.112(7/16)	7.7	0.3	8	13	30	3920	16.5
	30	5	14	6	12.7(1/2)	9	0.3	8	13	30	5000	25
	36	5	17	8	15.875(5/8)	10.4	0.5	8	14	25	7450	43
	43	6.5	21	10	19.05(3/4)	12.9	0.5	8	14	25	9410	72
	50	6.5	24	12	22.225(7/8)	15.4	0.5	8	13	25	11000	107
	57	8	27	14	25.4(1)	16.9	0.7	10	16	24	15200	160
	64	8	33	16	28.575(1 1/8)	19.4	0.7	9	15	24	20200	210
	71	10	36	18	31.75(1 1/4)	21.9	0.7	9	15	24	25200	295
	77	10	40	20	34.925(1 3/8)	24.4	0.7	9	15	24	27800	380
	84	12	43	22	38.1(1 1/2)	25.8	0.7	10	15	23	35900	490

[Clearance]

Unit: mm

Radial clearance	0.035 or less
Axial clearance	0.1 or less



Permissible Tilt Angles

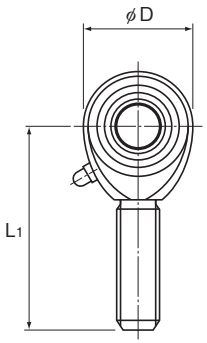
[Initial Lubrication]

This model can be used without lubrication. However, if desiring to provide initial lubrication, apply oil or grease to the spherical area.

[Identification of Left-hand Thread]

If the female threading is left-hand, symbol “L” is added. The actual product is marked with symbol “L” on the holder.

Model POS (Male Thread Type)



Model No.	Outer dimensions			Threaded	Holder Dimensions	
	Length L	Diameter D	Width B_1 0 −0.1	S_1 JIS Class 2	B ±0.1	L_1
POS 5	41	16	8	M5×0.8	6	33
POS 6	45	18	9	M6×1	6.75	36
POS 8	53	22	12	M8×1.25	9	42
POS 10	61	26	14	M10×1.5	10.5	48
POS 12	69	30	16	M12×1.75	12	54
POS 14	77	34	19	M14×2	13.5	60
POS 16	85	38	21	M16×2	15	66
POS 18	93	42	23	M18×1.5	16.5	72
POS 20	101	46	25	M20×1.5	18	78
POS 22	109	50	28	M22×1.5	20	84
POS 25	124	60	31	M24×2	22	94
POS 30	145	70	37	M30×2	25	110

[Material]

Holder : S35C (Chromate treatment)
Spherical inner ring : SUJ2, 58 HRC or higher
(Hard chrome plated except for the inner surface of the inner ring)
Bush : copper alloy

[Fitting with the Shaft]

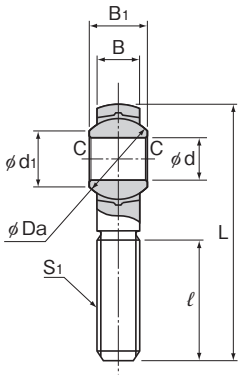
Condition	Dimensional tolerance of the shaft
Normal load	h7
Indeterminate load	p6

Model number coding

POS10 L

Model number

Left-hand thread



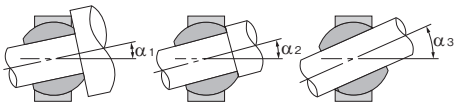
Unit: mm

	ℓ	Grease nipple (Lubrication hole)	Spherical inner ring dimensions: d H7	Ball diameter Da mm (inch)	d1	C	Permissible tilt angles: α1°	α2°	α3°	Static applied load Radial: Cs N	Mass g
	20	(ϕ1.5)	5	11.112(7/16)	7.7	0.3	8	13	30	3430	12.5
	22		6	12.7(1/2)	9	0.3	8	13	30	4900	19
	25	PB107	8	15.875(5/8)	10.4	0.5	8	14	25	6860	32
	29		10	19.05(3/4)	12.9	0.5	8	14	25	10800	54
	33		12	22.225(7/8)	15.4	0.5	8	13	25	16700	85
	36		14	25.4(1)	16.9	0.7	10	16	24	20600	126
	40		16	28.575(1 1/8)	19.4	0.7	9	15	24	25000	185
	44		18	31.75(1 1/4)	21.9	0.7	9	15	24	29400	260
	47		20	34.925(1 3/8)	24.4	0.7	9	15	24	34300	340
	51		22	38.1(1 1/2)	25.8	0.7	10	15	23	41200	435
	57	A-M6F	25	42.862(1 11/16)	29.6	0.8	9	15	23	72500	650
	66		30	50.8(2)	34.8	0.8	10	17	23	92200	1070

[Clearance]

Unit: mm

Radial clearance	0.035 or less
Axial clearance	0.1 or less



Permissible Tilt Angles

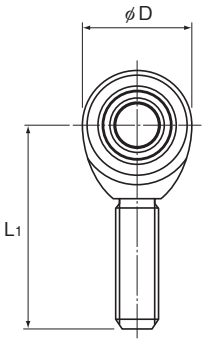
[Lubrication]

Apply lubricant before using the product. The holder has a lubrication hole and an oil groove; they allow grease to be replenished through the grease nipple as necessary. To lubricate the product, replenish grease from the holder lubrication hole for models POS5 and 6, or from the grease nipple for other models.

[Identification of Left-hand Thread]

If the male thread is left-hand, symbol “L” is added.
The actual product is marked with symbol “L” on the holder.

Model NOS-T (No Lubrication, Male Thread Type)



Model No.	Outer dimensions			Threaded	Holder Dimensions	
	Length L	Diameter D	Width B_1 0 –0.1	S_1 JIS Class 2	B +0.1 –0.4	L_1
NOS 3T	33	12	6	M3×0.5	4.5	27
NOS 4T	37	14	7	M4×0.7	5.3	30
NOS 5T	41	16	8	M5×0.8	6	33
NOS 6T	45	18	9	M6×1	6.75	36
NOS 8T	53	22	12	M8×1.25	9	42
NOS 10T	61	26	14	M10×1.5	10.5	48
NOS 12T	69	30	16	M12×1.75	12	54
NOS 14T	77	34	19	M14×2	13.5	60
NOS 16T	85	38	21	M16×2	15	66
NOS 18T	93	42	23	M18×1.5	16.5	72
NOS 20T	101	46	25	M20×1.5	18	78
NOS 22T	109	50	28	M22×1.5	20	84

[Material]

Holder : S35C (Chromate treatment)
For NOS3T and NOS4T, S20C
Spherical inner ring : SUJ2, 58 HRC or higher
(Hard chrome plated except for the inner surface of the inner ring)
Bush : Self-lubricating synthetic resin

[Fitting with the Shaft]

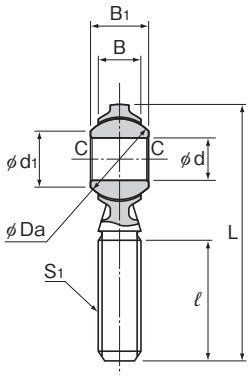
Condition	Dimensional tolerance of the shaft
Normal load	h7
Indeterminate load	p6

Model number coding

NOS10T L

Model number

Left-hand thread



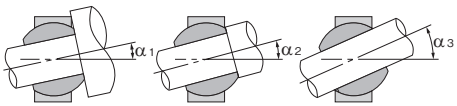
Unit: mm

		Spherical inner ring dimensions				Permissible tilt angles			Static applied load Radial	Mass
	ℓ	d H7	Ball diameter Da mm (inch)	d_1	C	α_1°	α_2°	α_3°	C_s N	g
	15	3	9.525(3/8)	7.4	0.3	8	10	42	1570	4.5
	17	4	10.319(13/32)	7.6	0.3	9	11	35	2250	7
	20	5	11.112(7/16)	7.7	0.3	8	13	30	3430	12.5
	22	6	12.7(1/2)	9	0.3	8	13	30	4900	19
	25	8	15.875(5/8)	10.4	0.5	8	14	25	6860	32
	29	10	19.05(3/4)	12.9	0.5	8	14	25	9410	54
	33	12	22.225(7/8)	15.4	0.5	8	13	25	11000	85
	36	14	25.4(1)	16.9	0.7	10	16	24	15200	126
	40	16	28.575(1 1/8)	19.4	0.7	9	15	24	20200	185
	44	18	31.75(1 1/4)	21.9	0.7	9	15	24	25200	260
	47	20	34.925(1 3/8)	24.4	0.7	9	15	24	27800	340
	51	22	38.1(1 1/2)	25.8	0.7	10	15	23	35900	435

[Clearance]

Unit: mm

Radial clearance	0.035 or less
Axial clearance	0.1 or less



Permissible Tilt Angles

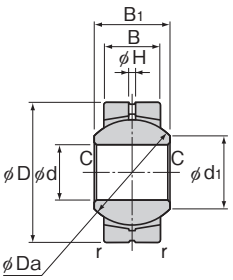
[Initial Lubrication]

This model can be used without lubrication. However, if desiring to provide initial lubrication, apply oil or grease to the spherical area.

[Identification of Left-hand Thread]

If the male thread is left-hand, symbol “L” is added.

Model PB (Standard Type)



Unit: mm

Model No.	Main dimensions							Ball diameter	Permissible tilt angles			Static applied load Radial	Mass
	Inner diameter d H7	Outer diameter D h6	Outer ring width B ±0.1	Inner ring width B_1 0 −0.1	d_1	H	C, r	Da mm (inch)	α_1°	α_2°	α_3°	C_s N	g
PB 5	5	16	6	8	7.7	1	0.3	11.112(7/16)	8	13	30	7840	8.5
PB 6	6	18	6.75	9	9	1	0.3	12.7(1/2)	8	13	30	9800	13
PB 8	8	22	9	12	10.4	1	0.5	15.875(5/8)	8	14	25	16700	24
PB 10	10	26	10.5	14	12.9	1.2	0.5	19.05(3/4)	8	14	25	23500	39
PB 12	12	30	12	16	15.4	1.5	0.5	22.225(7/8)	8	13	25	31400	58
PB 14	14	34	13.5	19	16.9	1.5	0.7	25.4(1)	10	16	24	40200	84
PB 16	16	38	15	21	19.4	2.5	0.7	28.575(1 1/8)	9	15	24	50000	111
PB 18	18	42	16.5	23	21.9	2.5	0.7	31.75(1 1/4)	9	15	24	61800	160
PB 20	20	46	18	25	24.4	2.5	0.7	34.925(1 3/8)	9	15	24	73500	210
PB 22	22	50	20	28	25.8	2.5	0.7	38.1(1 1/2)	10	15	23	88200	265
PB 25	25	56	22	31	29.6	3	0.8	42.862(1 11/16)	9	15	23	111000	390
PB 30	30	66	25	37	34.8	3	0.8	50.8(2)	10	17	23	148000	610

[Material]

Outer ring : S35C
Spherical inner ring : SUJ2, 58 HRC or higher
(Hard chrome plated except for the inner surface of the inner ring)
Bush : copper alloy

[Fitting with the Shaft]

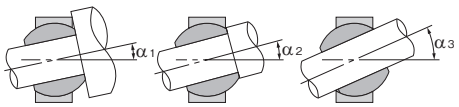
For the fitting between the shaft and the housing, the following values are recommended.

Condition		Shaft	Housing
Inner ring rotational load	Normal load	m6	H7
	Indeterminate load	n6	
Outer ring rotational load	Normal load	h7	M7
	Indeterminate load	k6	

[Clearance]

Unit: mm

Radial clearance	0.035 or less
Axial clearance	0.1 or less



Permissible Tilt Angles

[Lubrication]

Apply lubricant before using the product.
The holder has a lubrication hole and an oil groove; they allow grease to be replenished through the grease nipple as necessary.