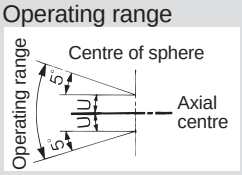
Floating Joint

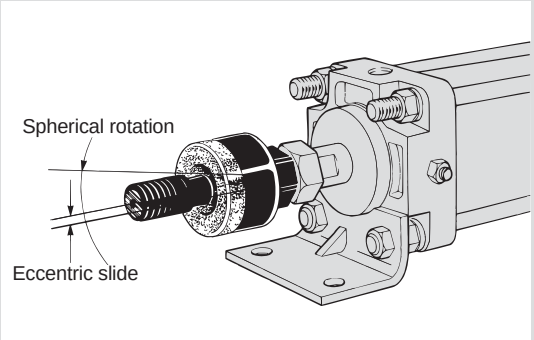
RoHS

The floating joint can absorb any “off-centering” or “loss of parallel accuracy” between the cylinder and the driven body.

- Centering is unnecessary.
- A high level of machining accuracy is unnecessary.
- The installation time is dramatically reduced.
- It is compact and is suitable for high tensile stresses.
- Long service life (with dustproof cover).
- Rotating angle: ±5°

Operating range





Series Variations

Series	Cylinder supply pressure		Applicable bore size [mm]	Mounting	Page
Standard ***JA Series*** 	Pneumatic cylinder	0.7 MPa or less	6, 10, 15	Basic type Flange type Foot type	1
		1 MPa or less	20, 25, 32, 40, 50, 63 80, 100, 125, 140, 160		
	Hydraulic cylinder	3.5 MPa or less	20, 25, 32, 40, 50, 63 80, 100, 125, 140, 160		
Heavy load ***JAH Series*** 	Hydraulic cylinder	7 MPa or less	40, 50, 63, 80, 100	Basic type Flange type Foot type	8
For compact cylinders ***JB Series*** 	Pneumatic cylinder	1 MPa or less	12, 16, 20, 25, 32 40, 50, 63, 80, 100	Basic type (Female thread)	11
Stainless steel type ***JS Series*** 	Pneumatic cylinder	1 MPa or less	10, 16, 20, 25 32, 40, 50, 63	Basic type	13
	Hydraulic cylinder	3.5 MPa or less	20, 25, 32 40, 50, 63		

Floating Joint: Standard Type

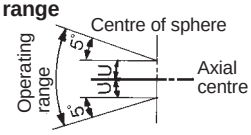
JA Series

RoHS

Specifications

Operating pressure	Pneumatic cylinder: 1 MPa or less
	Hydraulic cylinder: 3.5 MPa or less
Mounting	Basic type, Flange type, Foot type

Operating range



JA series

⚠ Precautions

Be sure to read this before handling the products. Refer to back for Safety Instructions.

Mounting

⚠Warning

1. To screw the male threads of the rod into the female threads of the socket or the case, make sure that it does not bottom out.
If the floating joint is used with its rod bottom out, the stud will not be able to float, causing damage.
For the screw-in depth of the female threads, refer to the dimensions (page 3). As a rule, after the rod bottoms out, back off 1 to 2 turns.

2. The dust cover may adhere to the stud. In this case, move the dust cover at the neck of the stud by the finger or twist the stud slightly left or right to break in the dust cover before use.
Additionally, when screwing the stud and socket or the case into a driven body, screw in such parts with the dust cover removed. When screwing in such parts without removing the dust cover, this may cause damage to the dust cover.

3. To use a floating joint to connect the cylinder rod to a driven body, secure it in place by applying a torque that is appropriate for the thread size. Also, if there is a risk of loosening during operation, take measures to prevent loosening, such as using a locking pin or thread adhesive. In the event that the connected portion becomes loose, the driven body might lose control or fall off, leading to equipment damage or injury to personnel.

4. This product is not a rotary joint. So, the product cannot be used for rotational or rotation acting applications.

5. Be sure to use the cushion mechanism of the cylinder or the buffer mechanism, such as the shock absorber so that any impact force is not applied to the floating joint when stopping a driven body. If there is no buffer mechanism, an excessive impact force is generated. As a result, the tensile compression force of the floating joint may exceed its maximum level.

Maintenance

⚠Warning

1. Do not reuse if disassembled.
High strength adhesive is applied to the portion of the connection that is threaded to prevent it from loosening, and it must not be disassembled. If it is forcefully disassembled, it could lead to damage.

Model/Specifications

Model	Applicable bore size [mm]	Applicable cylinder nominal thread size	Maximum operating tension and compression force (N)			Allowable eccentricity **U** [mm]	Rotating angle	Ambient temperature
			Basic type	Flange type	Foot type			
Standard/Thread nominal size								
JA6-3-050	6	M3 x 0.5	19	–	–	0.5	±5°	-5 to 60 °C
JA10-4-070	10	M4 x 0.7	54	–	–	0.5		
JA15-5-080	10, 15	M5 x 0.8	123	–	–	0.5		
JA15-6-100	15	M6 x 1	123	–	–	0.5		
JA□20-8-125	20	M8 x 1.25	1100	1100	1000	0.5		
JA□30-10-125	25, 32	M10 x 1.25	2500	2500	2000	0.5		
JA□40-14-150	40	M14 x 1.5	4400	4400	4400	0.75		
JA□63-18-150	50, 63	M18 x 1.5	11000	11000	9000	1		
JA□80-22-150	80	M22 x 1.5	18000	18000	14000	1.25		
JA□100-26-150	100	M26 x 1.5	28000	28000	22000	2		
JA□140-30-150	125, 140	M30 x 1.5	54000	36000	36000	2.5		
JA□160-36-150	160	M36 x 1.5	71000	55000	55000	3		
Semi-standard/Thread nominal size								
JA□20-8-100	20	M8 x 1	1100	1100	1000	0.5	±5°	
JA□25-10-150	25	M10 x 1.5	2500	2500	2000	0.5		
JA□32-10-100	32	M10 x 1	2500	2500	2000	0.5		
JA□40-12-125	32, 40	M12 x 1.25	4400	4400	4400	0.75		
JA□40-12-150	40	M12 x 1.5	4400	4400	4400	0.75		
JA□40-12-175	32, 40	M12 x 1.75	4400	4400	4400	0.75		
JA□50-16-150	50	M16 x 1.5	11000	11000	9000	1		
JA□63-16-200	50, 63	M16 x 2	11000	11000	9000	1		
JA□80-20-250	80	M20 x 2.5	18000	18000	14000	1.25		
JA□100-24-300	100	M24 x 3	28000	28000	22000	2		
JA□100-27-150	100	M27 x 1.5	28000	28000	22000	2		
JA□125-27-200	125	M27 x 2	28000	28000	28000	2		
JA□160-33-200	160	M33 x 2	71000	55000	55000	3		

How to Order

JA | **F** | **40** | – | **14-150** | – | |

Mounting type

—	Basic type
F	Flange type
L	Foot type

Applicable bore size [mm]

Model	Symbol	Applicable bore size [mm]
Standard	**6**	6
	10	10
	15	10, 15
	20	20
	30	25, 32
	40	40
	63	50, 63
	80	80
	100	100
	140	125, 140
	160	160
	180	180
	200	200

Thread nominal size (Standard)

Nominal thread size	Applicable cylinder nominal thread size
3-050	M3 x 0.5
4-070	M4 x 0.7
5-080	M5 x 0.8
6-100	M6 x 1
8-125	M8 x 1.25
10-125	M10 x 1.25
14-150	M14 x 1.5
18-150	M18 x 1.5
22-150	M22 x 1.5
26-150	M26 x 1.5
30-150	M30 x 1.5
36-150	M36 x 1.5

Option

—	None
X11	High temperature specifications -5 to 100 °C

⚠Caution

1. The black zinc chromate treatment is applied to the material surfaces of the case, flange and foot. However, the white deposit may rarely occur on the surface. This white deposit does not affect the product functions. However, if the white deposit becomes a problem from a viewpoint of appearance, special products with the surface treatment changed to the electroless nickel plating are also available. For details, please contact SMC.

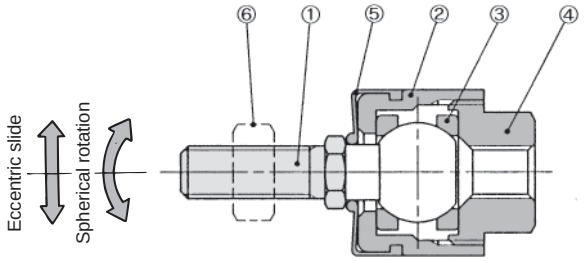
Made to Order: Individual Specifications -X530

Note) For details, refer to page 6. For pneumatic cylinders

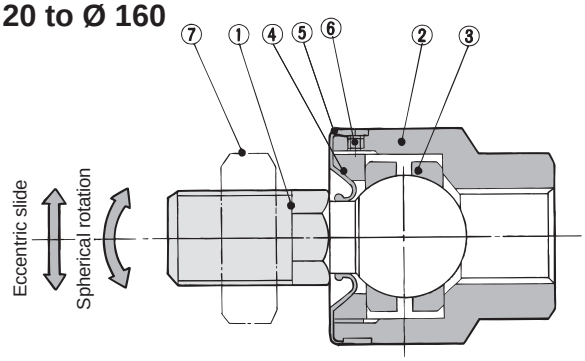
SMC

Construction

Ø 6 to Ø 15



Ø 20 to Ø 160



Component Parts

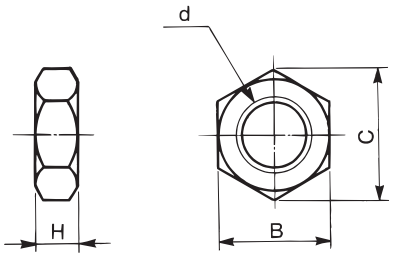
No.	Description	Material	Note
1	**Stud**	Free-cutting steel	Electroless nickel plated
2	**Case**	Brass	Electroless nickel plated
3	**Ring**	Stainless steel	
4	**Socket**	Brass	Electroless nickel plated
5	**Dust cover**	Synthetic rubber	
6	**Rod end nut**	Low carbon steel wire rod	Zinc chromated

No.	Description	Material	Note
1	**Stud**	Chromium molybdenum steel	Dyed black
2	**Case**	Carbon steel	Black zinc chromated
3	**Ring**	Chromium molybdenum steel	
4	**Cap**	Carbon steel	Black zinc chromated
5	**Dust cover**	Synthetic rubber	
6	**Set screw**	Carbon steel	Zinc chromated
7	**Rod end nut**	Carbon steel	Zinc chromated
8	**Flange**	Rolled steel	Black zinc chromated
9	**Foot**	Rolled steel	Black zinc chromated

Accessory Dimensions

Rod end nut

One rod end nut is supplied with the JA series or JAH basic type. If additional nuts are needed, please order them using the part no. shown below.



[mm]

Model	Order no.	**d**: Thread nominal size	**H**	**B**	**C**
JA6-3-050	DA00201	M3×0.5	2.4	5.5	6.4
JA10-4-070	DA00117	M4×0.7	3.2	7	8.1
JA15-5-080	DA00118	M5×0.8	4	8	9.2
JA15-6-100	DA00119	M6×1	5	10	11.5
JA20-8-100	DA00207	M8×1	5	13	15
JA20-8-125	DA00169	M8×1.25	5	13	15
JA32-10-100	DA00141	M10×1	6	17	19.6
JA30-10-125	DA00142	M10×1.25	6	17	19.6
JA25-10-150	DA00140	M10×1.5	6	17	19.6
JA40-12-125	DA00145	M12×1.25	7	19	21.9
JA40-12-150	DA00146	M12×1.5	7	19	21.9
JA40-12-175	DA00143	M12×1.75	7	19	21.9
JA40-14-150	DA00148	M14×1.5	8	22	25.4
JA50-16-150	DA00151	M16×1.5	10	24	27.7
JAH40-16-150					
JA63-16-200	DA00150	M16×2	10	24	27.7
JA63-18-150	DA00153	M18×1.5	11	27	31.2

[mm]

Model	Order no.	**d**: Thread nominal size	**H**	**B**	**C**
JAH50-20-150	DA00155	M20×1.5	12	30	34.6
JA80-20-250	DA00154	M20×2.5	12	30	34.6
JA80-22-150	DA00156	M22×1.5	13	32	37
JAH63-24-150	DA00158	M24×1.5	14	36	41.6
JAH63-24-200	DA00159	M24×2	14	36	41.6
JA100-24-300	DA00157	M24×3	14	36	41.6
JA100-26-150	DA00160	M26×1.5	16	41	47.3
JA100-27-150	DA00161	M27×1.5	16	41	47.3
JA125-27-200	DA00162	M27×2	16	41	47.3
JA140-30-150	DA00224	M30×1.5	18	46	53.1
JAH80-30-150					
JAH80-30-200	DA00163	M30×2	18	46	53.1
JA160-33-200	DA00225	M33×2	20	50	57.7
JA160-36-150	DA00164	M36×1.5	21	55	63.5
JAH100-39-150	DA00204	M39×1.5	23	60	69.3
JAH100-42-300	DA00165	M42×3	25	65	75
JAH100-48-150	DA00205	M48×1.5	29	75	86.5

Floating Joint Replacement Parts

Dust cover

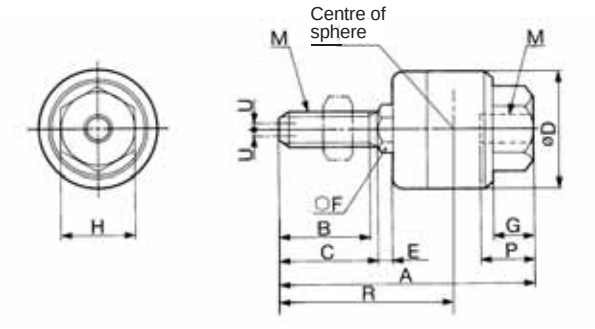
Order with the following part no. if dust cover is damaged.
Replaceable dust cover is only for the basic type. Flange type and foot type cannot be replaced.

Part no. for dust cover	Applicable model
P2152051	JA6, JA10
P2152052	JA15, JB12, JB16
P215215	JA20, JB20
P215225	JA30, JB30
P215235	JA40, JB40
P215245	JA63, JA50, JB63

Part no. for dust cover	Applicable model
P215255	JA80, JAH40, JB80
P215265	JA100, JAH50, JB100
P215275	JA125, JAH63
P215285	JA140, JAH80, JB140
P215295	JA160, JAH100, JB160

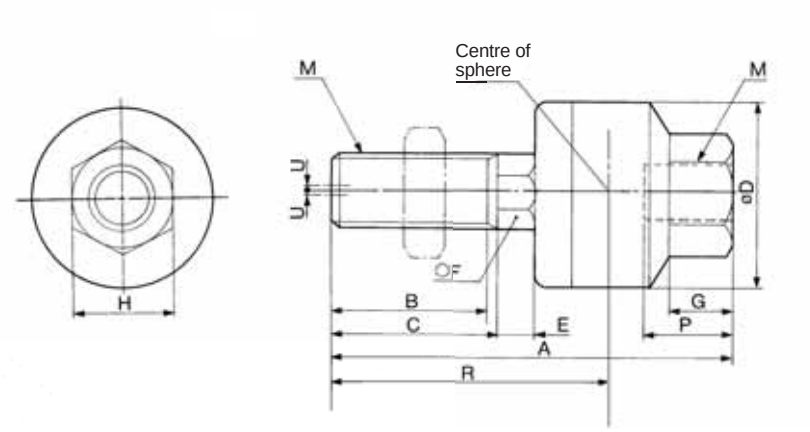
Basic Type: JA6 to JA160

JA6 to 15

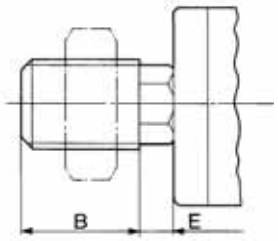


Use the precision spanner for clock 4 mm in the case of mounting male thread of JA6 and JA10.

JA20 to 160



Without C-dimension

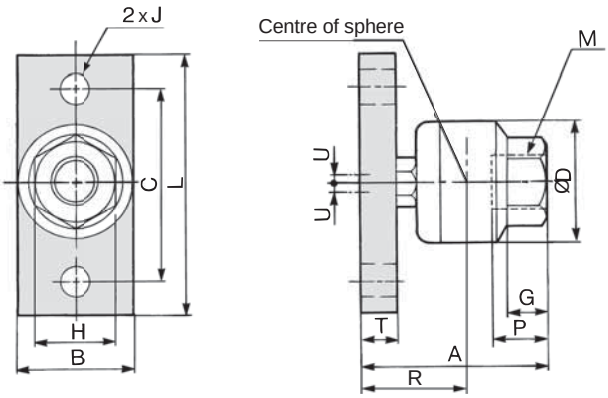


[mm]

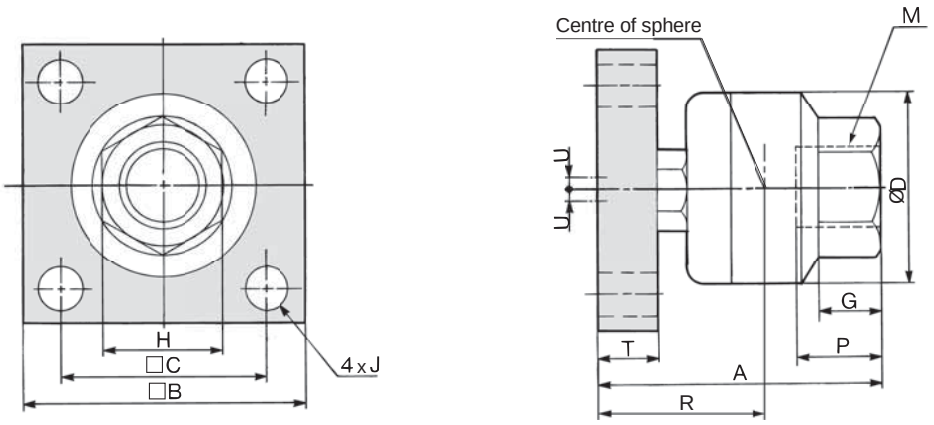
Applicable bore size [mm]	Model	M		A	B	C	D	E	F	G	H	Centre of sphere R	Maximum thread depth P	Allowable eccentricity U	Maximum operating tension and compression force [N]	Weight [kg]
		Nominal size	Pitch													
Standard Pneumatic: Up to 1 MPa Hydraulic: Up to 3.5 MPa																
6	**JA6-3-050**	3	0.5	23.2	7	8	12	1.5	4	3.2	5.5	15	5	0.5	19	0.01
10 (CJ1)	**JA10-4-070**	4	0.7	26	9	10	12	1.5	4	4	7	17	5.5	0.5	54	0.01
10 (CZ1), 15 (CJ1)	**JA15-5-080**	5	0.8	34.5	12.5	14	16	2	6	5	10	23	7	0.5	123	0.02
15 (CZ1)	**JA15-6-100**	6	1	34.5	12.5	14	16	2	6	5	10	23	7	0.5	123	0.02
20	**JA20-8-125**	8	1.25	44	17.5	–	21	4.5	7	7	13	30.5	8	0.5	1100	0.05
25, 32	**JA30-10-125**	10	1.25	49.5	19.5	–	24	5	8	8	17	34	9	0.5	2500	0.07
40	**JA40-14-150**	14	1.5	60	20	–	31	6	11	11	22	38	13	0.75	4400	0.16
50, 63	**JA63-18-150**	18	1.5	74.5	25	–	41	7.5	14	13.5	27	47.5	15	1	11000	0.31
80	**JA80-22-150**	22	1.5	89.5	29	–	50	9.5	19	16	32	56.5	18	1.25	18000	0.58
100	**JA100-26-150**	26	1.5	110	35	–	59.5	11.5	24	20	41	68	24	2	28000	1.08
125, 140	**JA140-30-150**	30	1.5	152	42	45	79	14	30	22	46	94.5	38	2.5	54000	2.7
160	**JA160-36-150**	36	1.5	178	52	55	96	16	36	24	55	112	42	3	71000	4.7
Semi-standard Pneumatic: Up to 1 MPa Hydraulic: Up to 3.5 MPa																
20	**JA20-8-100**	8	1	44	17.5	–	21	4.5	7	7	13	30.5	8	0.5	1100	0.05
25	**JA25-10-150**	10	1.5	49.5	19.5	–	24	5	8	8	17	34	9	0.5	2500	0.07
32	**JA32-10-100**	10	1	49.5	19.5	–	24	5	8	8	17	34	9	0.5	2500	0.07
32, 40	**JA40-12-125**	12	1.25	60	20	–	31	6	11	11	22	38	13	0.75	4400	0.16
40	**JA40-12-150**	12	1.5	60	20	–	31	6	11	11	22	38	13	0.75	4400	0.16
32, 40	**JA40-12-175**	12	1.75	60	20	–	31	6	11	11	22	38	13	0.75	4400	0.16
50	**JA50-16-150**	16	1.5	71.5	22	–	41	7.5	14	13.5	27	44.5	15	1	11000	0.3
50, 63	**JA63-16-200**	16	2	71.5	22	–	41	7.5	14	13.5	27	44.5	15	1	11000	0.3
80	**JA80-20-250**	20	2.5	90.5	27	30	50	9.5	19	16	32	57.5	18	1.25	18000	0.6
100	**JA100-24-300**	24	3	110	32	35	59.5	11.5	24	20	41	68	24	2	28000	1.05
100	**JA100-27-150**	27	1.5	110	35	–	59.5	11.5	24	20	41	68	24	2	28000	1.08
125	**JA125-27-200**	27	2	123	34	38	66	13	24	20	41	77	24	2	28000	1.5
160	**JA160-33-200**	33	2	165	38	42	96	16	36	24	55	99	42	3	71000	4.5

Flange Type: JAF20 to JAF160

JAF20 to Ø 40



Ø JAF50 to Ø 160

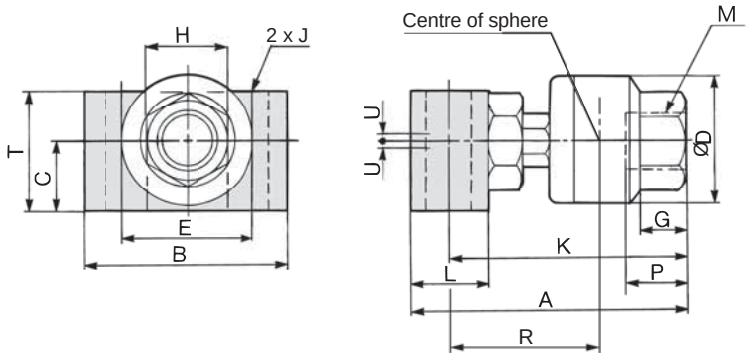


[mm]

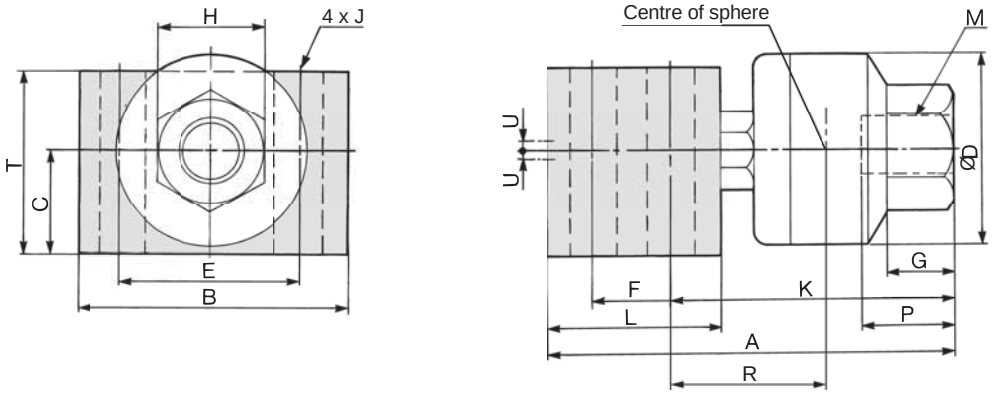
Applicable bore size [mm]	Model	M		A	B	L	C	D	T	J	G	H	Centre of sphere R	Maximum thread depth P	Allowable eccentricity U	Maximum operating tension and compression force (N)	Weight [kg]
		Nominal size	Pitch														
Standard Pneumatic: Up to 1 MPa Hydraulic: Up to 3.5 MPa																	
20	**JAF20-8-125**	8	1.25	32.5	19	48	36	21	6	6.6	7	13	19	8	0.5	1100	0.08
25, 32	**JAF30-10-125**	10	1.25	36	25	52	40	24	6	6.6	8	17	20.5	9	0.5	2500	0.12
40	**JAF40-14-150**	14	1.5	49	32	70	52	31	9	9	11	22	27	13	0.75	4400	0.28
50, 63	**JAF63-18-150**	18	1.5	61.5	65	–	45	41	12	9	13.5	27	34.5	15	1	11000	0.63
80	**JAF80-22-150**	22	1.5	76.5	75	–	55	50	16	11	16	32	43.5	18	1.25	18000	1.15
100	**JAF100-26-150**	26	1.5	94	90	–	65	59.5	19	11	20	41	52	24	2	28000	2.07
125, 140	**JAF140-30-150**	30	1.5	131	125	–	82	79	24	18	22	46	73.5	38	2.5	36000	5.2
160	**JAF160-36-150**	36	1.5	152	150	–	100	96	29	22	24	55	86	42	3	55000	9
Semi-standard Pneumatic: Up to 1 MPa Hydraulic: Up to 3.5 MPa																	
20	**JAF20-8-100**	8	1	32.5	19	48	36	21	6	6.6	7	13	19	8	0.5	1100	0.08
25	**JAF25-10-150**	10	1.5	36	25	52	40	24	6	6.6	8	17	20.5	9	0.5	2500	0.12
32	**JAF32-10-100**	10	1	36	25	52	40	24	6	6.6	8	17	20.5	9	0.5	2500	0.12
32, 40	**JAF40-12-125**	12	1.25	49	32	70	52	31	9	9	11	22	27	13	0.75	4400	0.28
40	**JAF40-12-150**	12	1.5	49	32	70	52	31	9	9	11	22	27	13	0.75	4400	0.28
32, 40	**JAF40-12-175**	12	1.75	49	32	70	52	31	9	9	11	22	27	13	0.75	4400	0.28
50	**JAF50-16-150**	16	1.5	61.5	65	–	45	41	12	9	13.5	27	34.5	15	1	11000	0.63
50, 63	**JAF63-16-200**	16	2	61.5	65	–	45	41	12	9	13.5	27	34.5	15	1	11000	0.63
80	**JAF80-20-250**	20	2.5	76.5	75	–	55	50	16	11	16	32	43.5	18	1.25	18000	1.15
100	**JAF100-24-300**	24	3	94	90	–	65	59.5	19	11	20	41	52	24	2	28000	2.07
100	**JAF100-27-150**	27	1.5	94	90	–	65	59.5	19	11	20	41	52	24	2	28000	2.07
125	**JAF125-27-200**	27	2	106	100	–	72	66	21	18	20	41	60	24	2	28000	2.8
160	**JAF160-33-200**	33	2	152	150	–	100	96	29	22	24	55	86	42	3	55000	9

Foot Type: JAL20 to JAF160

JAL20 to 100



JAL125 to 160



[mm]

Applicable bore size [mm]	Model	M		A	B	C	D	E	F	K	L	T	J	G	H	Centre of sphere R	Maximum thread depth P	Allowable eccentricity U	Maximum operating tension and compression force [N]	Weight [kg]
		Nominal size	Pitch																	
Standard Pneumatic: Up to 1 MPa Hydraulic: Up to 3.5 MPa																				
20	**JAL20-8-125**	8	1.25	44	30	11.5	21	18	–	38	12	19	6.6	7	13	24.5	8	0.5	1000	0.09
25, 32	**JAL30-10-125**	10	1.25	52	42	14	24	24	–	44	16	25	9	8	17	28.5	9	0.5	2000	0.18
40	**JAL40-14-150**	14	1.5	67	52	17.5	31	30	–	57.5	19	30	11	11	22	35.5	13	0.75	4400	0.36
50, 63	**JAL63-18-150**	18	1.5	82.5	56	23	41	34	–	71.5	22	38	11	13.5	27	44.5	15	1	9000	0.61
80	**JAL80-22-150**	22	1.5	98.5	70	28	50	42	–	86	25	47	14	16	32	53	18	1.25	14000	1.09
100	**JAL100-26-150**	26	1.5	123	80	35	59.5	48	–	107	32	58	16	20	41	65	24	2	22000	2.03
125, 140	**JAL140-30-150**	30	1.5	187	96	45	79	60	44	125	80	79	18	22	46	67.5	38	2.5	36000	6.4
160	**JAL160-36-150**	36	1.5	213	116	55	96	74	48	144	90	89	22	24	55	78	42	3	55000	10
Semi-standard Pneumatic: Up to 1 MPa Hydraulic: Up to 3.5 MPa																				
20	**JAL20-8-100**	8	1	44	30	11.5	21	18	–	38	12	19	6.6	7	13	24.5	8	0.5	1000	0.09
25	**JAL25-10-150**	10	1.5	52	42	14	24	24	–	44	16	25	9	8	17	28.5	9	0.5	2000	0.18
32	**JAL32-10-100**	10	1	52	42	14	24	24	–	44	16	25	9	8	17	28.5	9	0.5	2000	0.18
32, 40	**JAL40-12-125**	12	1.25	67	52	17.5	31	30	–	57.5	19	30	11	11	22	35.5	13	0.75	4400	0.36
40	**JAL40-12-150**	12	1.5	67	52	17.5	31	30	–	57.5	19	30	11	11	22	35.5	13	0.75	4400	0.36
32, 40	**JAL40-12-175**	12	1.75	67	52	17.5	31	30	–	57.5	19	30	11	11	22	35.5	13	0.75	4400	0.36
50	**JAL50-16-150**	16	1.5	82.5	56	23	41	34	–	71.5	22	38	11	13.5	27	44.5	15	1	9000	0.61
50, 63	**JAL63-16-200**	16	2	82.5	56	23	41	34	–	71.5	22	38	11	13.5	27	44.5	15	1	9000	0.61
80	**JAL80-20-250**	20	2.5	98.5	70	28	50	42	–	86	25	47	14	16	32	53	18	1.25	14000	1.09
100	**JAL100-24-300**	24	3	123	80	35	59.5	48	–	107	32	58	16	20	41	65	24	2	22000	2.03
100	**JAL100-27-150**	27	1.5	123	80	35	59.5	48	–	107	32	58	16	20	41	65	24	2	22000	2.03
125	**JAL125-27-200**	27	2	155	88	38	66	54	36	102	70	69	14	20	41	56	24	2	28000	4.1
160	**JAL160-33-200**	33	2	213	116	55	96	74	48	144	90	89	22	24	55	78	42	3	55000	10

JA Series
Made to Order: Individual Specifications

Please contact SMC for detailed dimensions, specifications and lead times.

Made to Order

Symbol
-X530

1 For Pneumatic Cylinders (Ø 180, Ø 200)

JA series standard type floating joint which is used for pneumatic cylinders (Ø 180, Ø 200)
∗ This product is dedicated to the pneumatic cylinders.

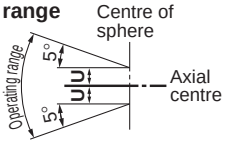
Model/Specifications

Applicable bore size [mm]	Model	Applicable cylinder nominal thread size	Maximum operating tensile and compressive force (N)			Allowable eccentricity (**U**)	Rotating angle	Ambient temperature
			Basic type	Flange type	Foot type			
180	**JA□180-40-150-X530**	M40 x 1.5	71000	55000	55000	3	5°	-5 to 60 °C
200	**JA□200-45-150-X530**	M45 x 1.5						

Specifications

Operating pressure	Pneumatic cylinder: 1 MPa or less
Mounting	Basic type, Flange type, Foot type

Operating range



How to Order

JA F 180 – 40-150 – X530

Mounting type

—	Basic type
F	Flange type
L	Foot type

Applicable bore size

Symbol	Applicable bore size
180	180 mm
200	200 mm

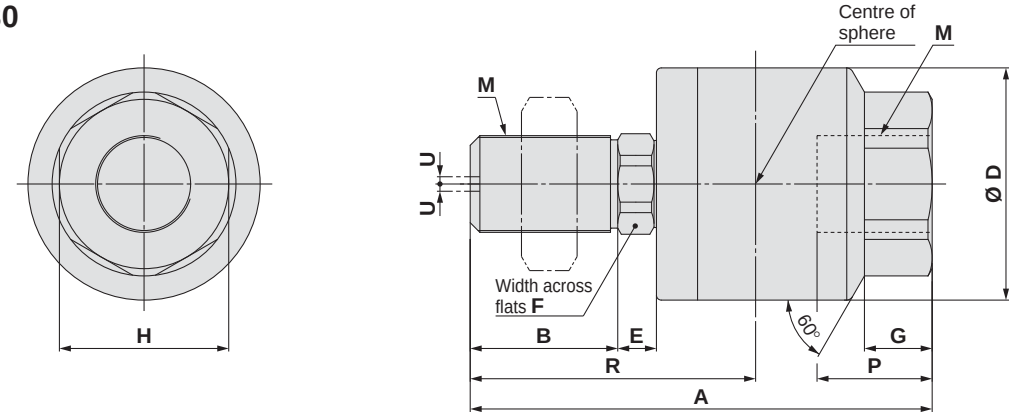
Nominal thread size

Nominal thread size	Applicable cylinder nominal thread size
40-150	M40 x 1.5
45-150	M45 x 1.5

For pneumatic cylinders (Ø 180, Ø 200)

Basic Type: JA

JA $\frac{180}{200}$-□-X530



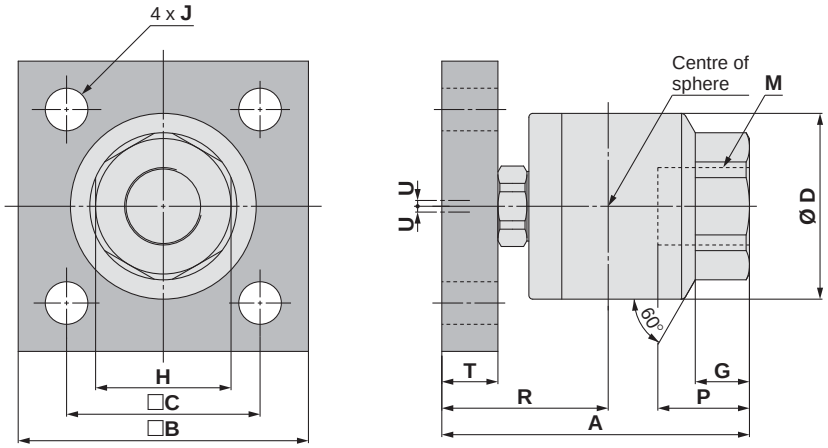
Dimensions

[mm]

Applicable bore size	Model	M		A	B	D	E	F	G	H	Centre of sphere **R**	Maximum screw-in depth **P**	Allowable eccentricity **U**	Maximum operating tensile and compressive force [N]	Weight [kg]
		Nominal size	Pitch												
180	**JA180-40-150-X530**	40	1.5	191	61	96	16	36	28	70	118	49	3	71000	5.3
200	**JA200-45-150-X530**	45	1.5	191	61	96	16	36	28	70	118	49	3	71000	5.4

Flange Type: JAF

JAF 180 / 200 -□-X530

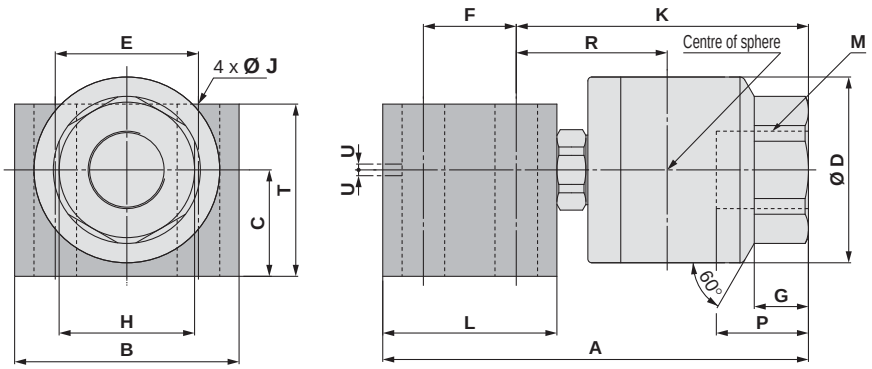


Dimensions [mm]

Applicable bore size	Model	M		A	B	C	D	T	J	G	H	Centre of sphere R	Maximum screw-in depth P	Allowable eccentricity U	Maximum operating tensile and compressive force (N)	Weight (kg)
		Nominal size	Pitch													
180	**JAF180-40-150-X530**	40	1.5	159	150	100	96	29	22	28	70	86	49	3	55000	9.1
200	**JAF200-45-150-X530**	45	1.5	159	150	100	96	29	22	28	70	86	49	3	55000	9.2

Foot Type: JAL

JAL 180 / 200 -□-X530

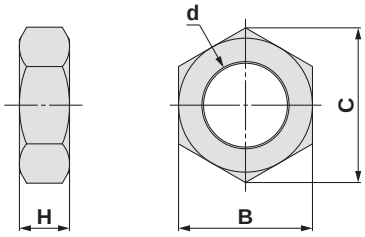


Dimensions [mm]

Applicable bore size	Model	M		A	B	C	D	E	F	K	L	T	J	G	H	Centre of sphere R	Maximum screw-in depth P	Allowable eccentricity U	Maximum operating tensile and compressive force [N]	Weight [kg]
		Nominal size	Pitch																	
180	**JAL180-40-150-X530**	40	1.5	220	116	55	96	74	48	151	90	89	22	28	70	78	49	3	55000	10.3
200	**JAL200-45-150-X530**	45	1.5	220	116	55	96	74	48	151	90	89	22	28	70	78	49	3	55000	10.4

Rod End Nut

The basic type has one rod end nut attached, it is possible to order additional pieces by the order numbers below.



[mm]

Model	Order no.	**d**: Nominal thread size	H	B	C
JA180-40-150-X530	DA00425	M40 x 1.5	23	60	69.3
JA200-45-150-X530	DA00447	M45 x 1.5	27	70	80.8

Floating Joint Replacement Parts

Dust cover

When the dust cover is damaged and deteriorated, order with the part number below.
Replaceable dust cover is only for the basic type. Flange type and foot type cannot be replaced.

Part no. for dust cover	Applicable model
P215295	JA180, 200-□-X530

Floating Joint: Heavy Load Type

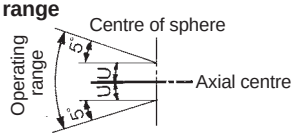
JAH Series

RoHS

Specifications

Operating pressure	Hydraulic cylinder: 7 MPa or less
Mounting	Basic type, Flange type, Foot type

Operating range



JAH series

JAHL series (Foot type)

JAHF series (Flange type)

Specifications

Model	Applicable bore size [mm]	Applicable cylinder nominal thread size	Maximum operating tension and compression force [N]			Allowable eccentricity U [mm]	Rotating angle	Ambient temperature
			Basic type	Flange type	Foot type			
Standard/Thread nominal size								
JAH□40-16-150	40	M16 x 1.5	11000	9000	9000	1.25	±5°	-5 to 60 °C
JAH□50-20-150	50	M20 x 1.5	18000	14000	14000	2		
JAH□63-24-150	63	M24 x 1.5	28000	22000	22000	2		
JAH□80-30-150	80	M30 x 1.5	54000	36000	36000	2.5		
JAH□100-39-150	100	M39 x 1.5	71000	55000	55000	3		
JAH□100-48-150	100	M48 x 1.5	71000	55000	55000	3		
Semi-standard/Thread nominal size								
JAH□63-24-200	63	M24 x 2	28000	22000	22000	2	±5°	
JAH□80-30-200	80	M30 x 2	54000	36000	36000	2.5		
JAH□100-42-300	100	M42 x 3	71000	55000	55000	3		

How to Order

JA H F 40 – 16-150 –

Heavy load type

Mounting type

—	Basic type
F	Flange type
L	Foot type

Applicable bore size [mm]

Model	Symbol	Applicable bore size [mm]
Heavy load type	**40**	40
	50	50
	63	63
	80	80
	100	100

Option

—	None
X11	High temperature specifications -5 to 100 °C

Thread nominal size (Standard)

Nominal thread size	Applicable cylinder nominal thread size
16-150	M16 x 1.5
20-150	M20 x 1.5
24-150	M24 x 1.5
30-150	M30 x 1.5
39-150	M39 x 1.5
48-150	M48 x 1.5

⚠ Precautions

Be sure to read this before handling the products. Refer to back page for Safety Instructions.

Mounting

⚠Warning

1. To screw the male threads of the rod into the female threads of the socket or the case, make sure that it does not bottom out. If the floating joint is used with its rod bottomed out, the stud will not be able to float, causing damage. For the screw-in depth of the female threads, refer to the dimensions (page 9). As a rule, after the rod bottoms out, back off 1 to 2 turns.

2. The dust cover may adhere to the stud. In this case, move the dust cover at the neck of the stud by the finger or twist the stud slightly left or right to break in the dust cover before use.

Additionally, when screwing the stud and socket or the case into a driven body, screw in such parts with the dust cover removed. When screwing in such parts without removing the dust cover, this may cause damage to the dust cover.

3. To use a floating joint to connect the cylinder rod to a driven body, secure it in place by applying a torque that is appropriate for the thread size. Also, if there is a risk of loosening during operation, take measures to prevent loosening, such as using a locking pin or thread adhesive.
In the event that the connected portion becomes loose, the driven body might lose control or fall off, leading to equipment damage or injury to personnel.

4. This product is not a rotary joint. So, the product cannot be used for rotational or rotation acting applications.

5. Be sure to use the cushion mechanism of the cylinder or the buffer mechanism, such as the shock absorber so that any impact force is not applied to the floating joint when stopping a driven body. If there is no buffer mechanism, an excessive impact force is generated. As a result, the tensile compression force of the floating joint may exceed its maximum level.

Maintenance

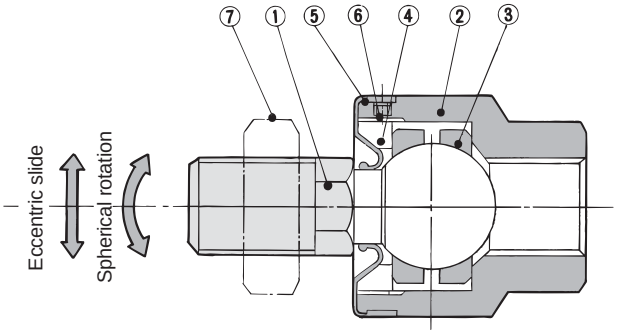
⚠Warning

1. Do not reuse if disassembled.
High strength adhesive is applied to the portion of the connection that is threaded to prevent it from loosening, and it must not be disassembled. If it is forcefully disassembled, it could lead to damage.

⚠Caution

1. The black zinc chromate treatment is applied to the material surfaces of the case, flange and foot. However, the white deposit may rarely occur on the surface. This white deposit does not affect the product functions. However, if the white deposit becomes a problem from a viewpoint of appearance, special products with the surface treatment changed to the electroless nickel plating are also available. For details, please contact SMC.

Construction



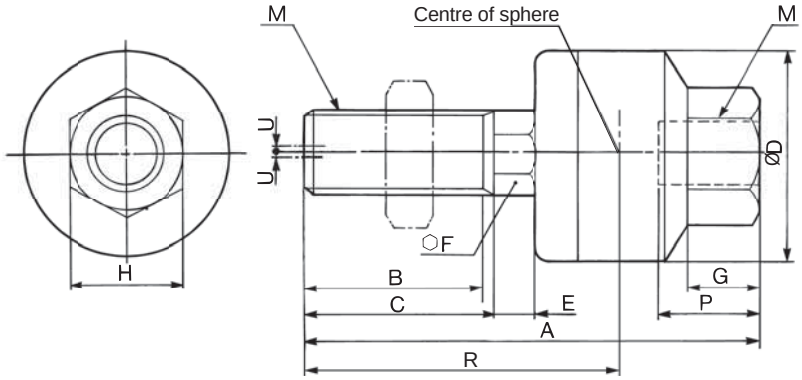
Refer to page 2 for replacement Parts.

Component Parts

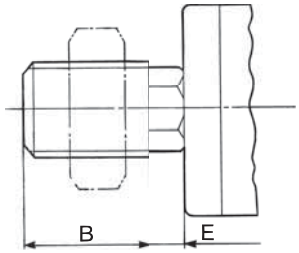
No.	Description	Material	Note
1	Stud	Chromium molybdenum steel	Dyed black
2	Case	Carbon steel	Black zinc chromated
3	Ring	Chromium molybdenum steel	
4	Cap	Carbon steel	Black zinc chromated
5	Dust cover	Synthetic rubber	
6	Set screw	Carbon steel	Zinc chromated
7	Rod end nut	Carbon steel	Zinc chromated
8	Flange	Rolled steel plate	Black zinc chromated
9	Foot	Rolled steel plate	Black zinc chromated

Basic Type: JAH

JAH40 to 100



Without C-dimension

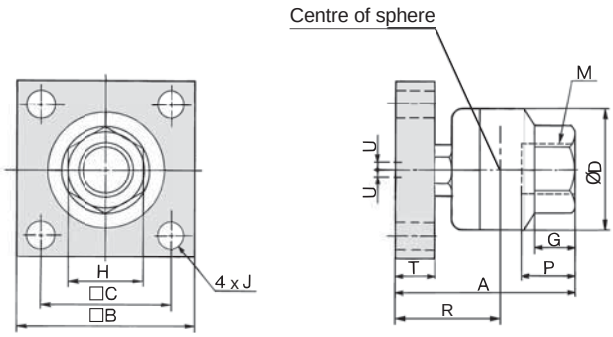


[mm]

Applicable bore size [mm]	Model	M		A	B	C	D	E	F	G	H	Centre of sphere R	Maximum thread depth P	Allowable eccentricity U	Maximum operating tension and compression force [N]	Weight [kg[
		Nominal size	Pitch													
Standard: Heavy Load Type Hydraulic: Up to 7 MPa																
40	**JAH40-16-150**	16	1.5	85.5	22	25	50	9.5	19	16	32	52.5	18	1.25	11000	0.58
50	**JAH50-20-150**	20	1.5	101	28	31	59.5	11.5	24	16	32	64	18	2	18000	1.08
63	**JAH63-24-150**	24	1.5	120	32	35	66	13	27	20	41	74	24	2	28000	1.5
80	**JAH80-30-150**	30	1.5	152	42	45	79	14	30	22	46	94.5	38	2.5	54000	2.7
100	**JAH100-39-150**	39	1.5	178	52	55	96	16	36	24	55	112	42	3	71000	4.8
100	**JAH100-48-150**	48	1.5	191	61	–	96	16	36	28	70	118	49	3	71000	5.4
Semi-standard: Heavy Load Type Hydraulic: Up to 7 MPa																
63	**JAH63-24-200**	24	2	120	32	35	66	13	27	20	41	74	24	2	28000	1.5
80	**JAH80-30-200**	30	2	152	41	45	79	14	30	22	46	94.5	38	2.5	54000	2.7
100	**JAH100-42-300**	42	3	178	55	–	96	16	36	24	55	112	42	3	71000	4.8

Flange Type: JAFH

JAFH40 to 100

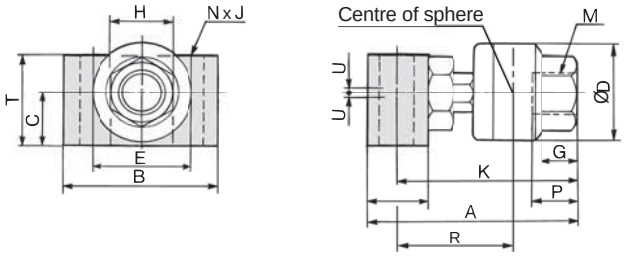


[mm]

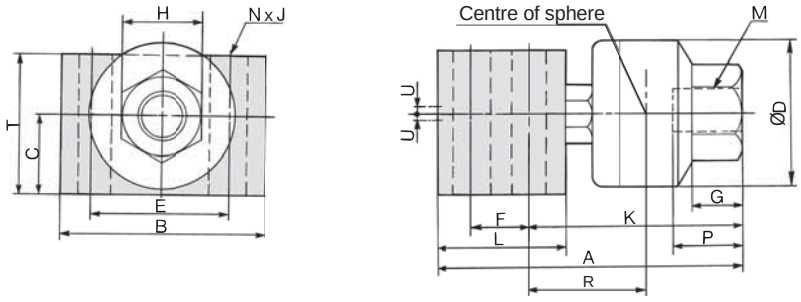
Applicable bore size [mm]	Model	M		A	B	C	D	T	J	G	H	Centre of sphere R	Maximum thread depth P	Allowable eccentricity U	Maximum operating tension and compression force [N]	Weight [kg]
		Nominal size	Pitch													
Standard: Heavy Load Type Hydraulic: Up to 7 MPa																
40	**JAHF40-16-150**	16	1.5	76	75	50	50	15	11	16	32	43	18	1.25	9000	1.25
50	**JAHF50-20-150**	20	1.5	89	100	62	59.5	18	14	16	32	52	18	2	14000	2.5
63	**JAHF63-24-150**	24	1.5	106	100	72	66	21	18	20	41	60	24	2	22000	2.8
80	**JAHF80-30-150**	30	1.5	131	125	82	79	24	18	22	46	73.5	38	2.5	36000	5.2
100	**JAHF100-39-150**	39	1.5	152	150	100	96	29	22	24	55	86	42	3	55000	9
100	**JAHF100-48-150**	48	1.5	159	150	100	96	29	22	28	70	86	49	3	55000	9.3
Semi-standard: Heavy Load Type Hydraulic: Up to 7 MPa																
63	**JAHF63-24-200**	24	2	106	100	72	66	21	18	20	41	60	24	2	22000	2.8
80	**JAHF80-30-200**	30	2	131	125	82	79	24	18	22	46	73.5	38	2.5	36000	5.2
100	**JAHF100-42-300**	42	3	152	150	100	96	29	22	24	55	86	42	3	55000	9

Foot Type: JAHL

JAHL40, 50



JAHL63 to 100



[mm]

Applicable bore size [mm]	Model	M		A	B	C	D	E	F	K	L	T	N	J	G	H	Centre of sphere R	Maximum thread depth P	Allowable eccentricity U	Maximum operating tension and compression force [N]	Weight [kg]
		Nominal size	Pitch																		
Standard: Heavy Load Type Hydraulic: Up to 7 MPa																					
40	**JAHL40-16-150**	16	1.5	98.5	70	28	50	42	–	86	25	47	2	14	16	32	53	18	1.25	9000	1.09
50	**JAHL50-20-150**	20	1.5	123	80	35	59.5	48	–	107	32	58	2	16	20	41	65	24	2	14000	2.03
63	**JAHL63-24-150**	24	1.5	155	88	38	66	54	36	102	70	69	4	18	20	41	56	24	2	22000	4.1
80	**JAHL80-30-150**	30	1.5	187	96	45	79	60	44	125	80	79	4	18	22	46	67.5	38	2.5	36000	6.4
100	**JAHL100-39-150**	39	1.5	213	116	55	96	74	48	144	90	89	4	22	24	55	78	42	3	55000	10
100	**JAHL100-48-150**	48	1.5	220	116	55	96	74	48	151	90	89	4	22	28	70	78	49	3	55000	10.5
Semi-standard: Heavy Load Type Hydraulic: Up to 7 MPa																					
63	**JAHL63-24-200**	24	2	155	88	38	66	54	36	102	70	69	4	18	20	41	56	24	2	22000	4.1
80	**JAHL80-30-200**	30	2	187	96	45	79	60	44	125	80	79	4	18	22	46	67.5	38	2.5	36000	6.4
100	**JAHL100-42-300**	42	3	213	116	55	96	74	48	144	90	89	4	22	24	55	78	42	3	55000	10

Floating Joint: For Compact Cylinders

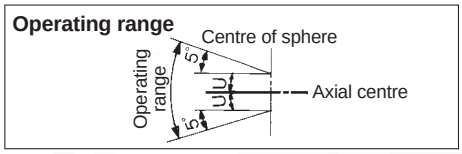
JB Series

RoHS

Specifications

Operating pressure	Air pressure compact cylinder 1 MPa or less

Operating range



Specifications

Model	Applicable bore size [mm]	Applicable cylinder nominal thread size	Maximum operating tension and compression force [N]		Allowable eccentricity U [mm]	Rotating angle	Ambient temperature
			Compression side	Tension side			
JB12-3-050	12	M3 x 0.5	112	112	0.5	±5°	-5 to 60°C
JB16-4-070	16	M4 x 0.7	200	200	0.5		
JB20-5-080	20	M5 x 0.8	1100	300	0.5		
JB25-6-100	25	M6 x 1	2500	500	0.5		
JB40-8-125	32, 40	M8 x 1.25	6000	1300	0.75		
JB63-10-150	50, 63	M10 x 1.5	11000	3100	1		
JB80-16-200	80	M16 x 2	18000	5000	1.25		
JB100-20-250	100	M20 x 2.5	28000	7900	2		
JB140-22-250	125, 140	M22 x 2.5	54000	15300	2.5		
JB160-24-300	160	M24 x 3	71000	20000	3		

How to Order

J B 40 – 8-125 –

For compact cylinders/ Female thread

Applicable bore size [mm]

Symbol	Applicable bore size [mm]
12	12
16	16
20	20
25	25
40	32, 40
63	50, 63
80	80
100	100
140	125, 140
160	160

Thread nominal size

Nominal thread size	Applicable cylinder nominal thread size
3-050	M3 x 0.5
4-070	M4 x 0.7
5-080	M5 x 0.8
6-100	M6 x 1
8-125	M8 x 1.25
10-150	M10 x 1.5
16-200	M16 x 2
20-250	M20 x 2.5
22-250	M22 x 2.5
24-300	M24 x 3

Option

—	None
X11	High temperature specifications -5 to 100 °C

⚠ Precautions

Be sure to read this before handling the products. Refer to back page for Safety Instructions.

Mounting

⚠Warning

1. To screw the male threads of the rod into the female threads of the socket or the case, make sure that it does not bottom out. If the floating joint is used with its rod bottomed out, the stud will not be able to float, causing damage. For the screw-in depth of the female threads, refer to the dimensions (page 12). As a rule, after the rod bottoms out, back off 1 to 2 turns.

2. The dust cover may adhere to the stud. In this case, move the dust cover at the neck of the stud by the finger or twist the stud slightly left or right to break in the dust cover before use.

Additionally, when screwing the stud and socket or the case into a driven body, screw in such parts with the dust cover removed. When screwing in such parts without removing the dust cover, this may cause damage to the dust cover.

3. To use a floating joint to connect the cylinder rod to a driven body, secure it in place by applying a torque that is appropriate for the thread size. Also, if there is a risk of loosening during operation, take measures to prevent loosening, such as using a locking pin or thread adhesive.
In the event that the connected portion becomes loose, the driven body might lose control or fall off, leading to equipment damage or injury to personnel.

4. This product is not a rotary joint. So, the product cannot be used for rotational or rotation acting applications.

5. Be sure to use the cushion mechanism of the cylinder or the buffer mechanism, such as the shock absorber so that any impact force is not applied to the floating joint when stopping a driven body. If there is no buffer mechanism, an excessive impact force is generated. As a result, the tensile compression force of the floating joint may exceed its maximum level.

Maintenance

⚠Warning

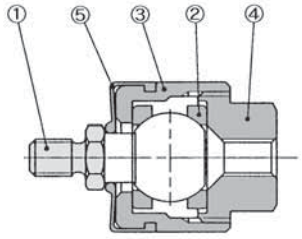
1. Do not reuse if disassembled.
High strength adhesive is applied to the portion of the connection that is threaded to prevent it from loosening, and it must not be disassembled. If it is forcefully disassembled, it could lead to damage.

⚠Caution

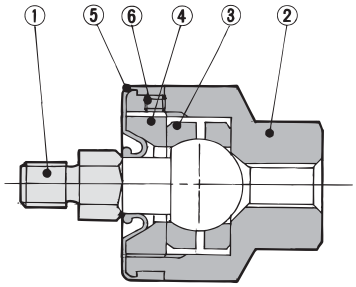
1. The black zinc chromate treatment is applied to the material surfaces of the case, flange and foot. However, the white deposit may rarely occur on the surface. This white deposit does not affect the product functions. However, if the white deposit becomes a problem from a viewpoint of appearance, special products with the surface treatment changed to the electroless nickel plating are also available. For details, please contact SMC.

Construction

Ø 12, Ø 16



Ø 20 to Ø 160



Component Parts

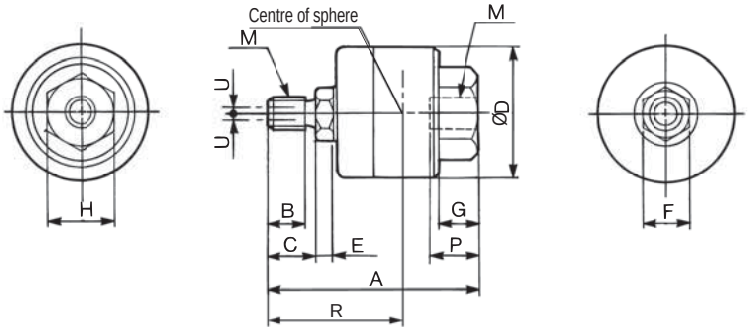
No.	Description	Material	Note
1	**Stud**	Free-cutting steel	Electroless nickel plated
2	**Case**	Brass	Electroless nickel plated
3	**Ring**	Stainless steel	
4	**Socket**	Brass	Electroless nickel plated
5	**Dust cover**	Synthetic rubber	

Refer to page 2 for replacement Parts.

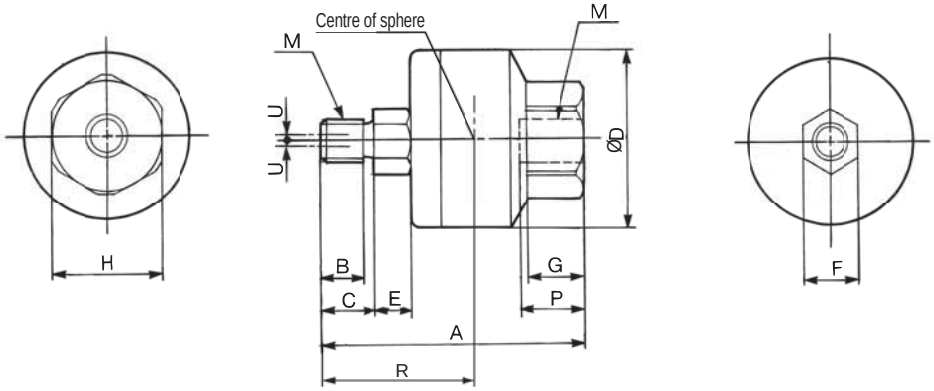
No.	Description	Material	Note
1	**Stud**	Chromium molybdenum steel	Dyed black
2	**Case**	Carbon steel	Black zinc chromated
3	**Ring**	Chromium molybdenum steel	
4	**Cap**	Carbon steel	Black zinc chromated
5	**Dust cover**	Synthetic rubber	
6	**Set screw**	Carbon steel	Zinc chromated

Basic Type: JB

JB20, 16



JB20 to 160



[mm]

Applicable bore size [mm]	Model	M		A	B	C	D	E	F	G	H	Centre of sphere R	Maximum thread depth P	Allowable eccentricity U	Maximum operating tension and compression force [N]		Weight [kg]
		Nominal size	Pitch												Compression	Tension	
12	**JB12-3-050**	3	0.5	24.5	3	4	16	2	6	5	10	13	7	0.5	112	112	0.02
16	**JB16-4-070**	4	0.7	26.5	4.5	6	16	2	6	5	10	15	7	0.5	200	200	0.02
20	**JB20-5-080**	5	0.8	33	5	6.5	21	4.5	7	7	13	19.5	8	0.5	1100	300	0.04
25	**JB25-6-100**	6	1	38	6	8	24	5	8	8	17	22.5	9	0.5	2500	500	0.07
32, 40	**JB40-8-125**	8	1.25	51	8.5	11	31	6	11	11	22	29	13	0.75	6000	1300	0.15
50, 63	**JB63-10-150**	10	1.5	62.5	10	13	41	7.5	14	13.5	27	35.5	15	1	11000	3100	0.29
80	**JB80-16-200**	16	2	80.5	16	20	50	9.5	19	16	32	47.5	18	1.25	18000	5000	0.56
100	**JB100-20-250**	20	2.5	101	21	26	59.5	11.5	24	20	41	59	24	2	28000	7900	1.04
125, 140	**JB140-22-250**	22	2.5	129	17	22	79	14	30	22	46	71.5	38	2.5	54000	15300	2.6
160	**JB160-24-300**	24	3	149	20	26	96	16	36	24	55	83	42	3	71000	20000	4.5

Floating Joint: Stainless Steel Type

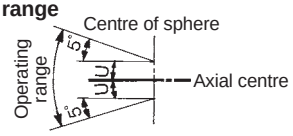
JS Series

RoHS

Specifications

Operating pressure	Pneumatic cylinder: 1 MPa or less
	Hydraulic cylinder: 3.5 MPa or less
Mounting	Basic type

Operating range



JS series

Specifications

Model	(1) Applicable bore size [mm]	Applicable cylinder nominal thread size	Maximum operating tension and compression force (N)	Allowable eccentricity U [mm]	Operating pressure		Ambient temperature
					pneumatic cylinder	Hydraulic cylinder	
JS10-4-070	10	M4 x 0.7	80	0.5	1 MPa or less	–	-5 to 70 °C
JS16-5-080	10, 16	M5 x 0.8	210	0.5			
JS20-8-125	20	M8 x 1.25	1100	0.5		3.5 MPa (2) or less	
JS32-10-125	25, 32	M10 x 1.25	2500	0.5			
JS40-14-150	40	M14 x 1.5	6000	0.75			
JS63-18-150	50, 63	M18 x 1.5	11000	1			

Note 1) Think of applicable bore size as a guide. For details, confirm the rod end thread diameter of a cylinder to be used in the catalogue.

Note 2) For 3.5 MPa hydraulic cylinders, operate within the maximum tension and compression force.

How to Order

J S 32 – 10-125

Stainless steel type

Applicable bore size [mm]

Symbol	Applicable bore size [mm]
10	10
16	10, 16
20	20
32	25, 32
40	40
63	50, 63

Note)

80	80
100	100

Nominal thread size

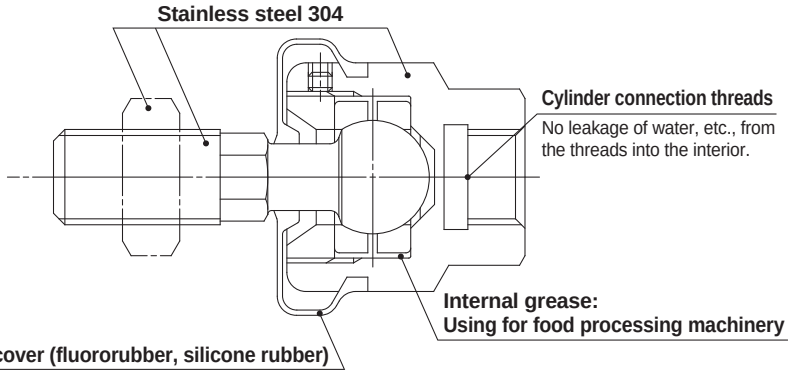
Symbol	Applicable cylinder nominal thread size
4-070	M4 x 0.7
5-080	M5 x 0.8
8-125	M8 x 1.25
10-125	M10 x 1.25
14-150	M14 x 1.5
18-150	M18 x 1.5

Dust cover material

Symbol	Material
—	Fluororubber
S	Silicone rubber

Made to Order: Individual Specifications -X530

Note) For details, refer to page 16.
For pneumatic cylinders



⚠ Precautions

Be sure to read this before handling the products. Refer to back page for Safety Instructions.

Mounting

⚠Warning

1. For the screw-in depth of the female threads, refer to the dimensions (page 15).

2. The dust cover may adhere to the stud. In this case, move the dust cover at the neck of the stud by the finger or twist the stud slightly left or right to break in the dust cover before use.
Additionally, when screwing the stud and socket or the case into a driven body, screw in such parts with the dust cover removed. When screwing in such parts without removing the dust cover, this may cause damage to the dust cover.

3. To use a floating joint to connect the cylinder rod to a driven body, secure it in place by applying a torque that is appropriate for the thread size. Also, if there is a risk of loosening during operation, take measures to prevent loosening, such as using a locking pin or thread adhesive.
In the event that the connected portion becomes loose, the driven body might lose control or fall off, leading to equipment damage or injury to personnel.

4. This product is not a rotary joint. So, the product cannot be used for rotational or rotation acting applications.

5. Be sure to use the cushion mechanism of the cylinder or the buffer mechanism, such as the shock absorber so that any impact force is not applied to the floating joint when stopping a driven body. If there is no buffer mechanism, an excessive impact force is generated. As a result, the tensile compression force of the floating joint may exceed its maximum level.

Maintenance

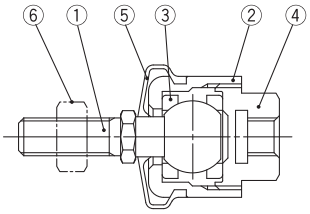
⚠Warning

1. Do not reuse if disassembled.
High strength adhesive is applied to the portion of the connection that is threaded to prevent it from loosening, and it must not be disassembled. If it is forcefully disassembled, it could lead to damage.

SMC

Construction

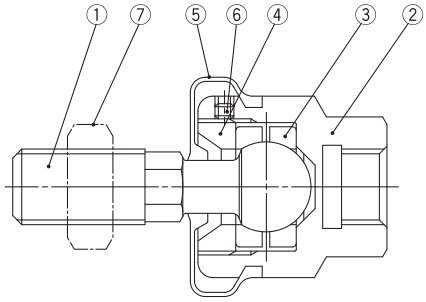
ø10, ø16



Component Parts

No.	Description	Material	Note
1	**Stud**	Stainless steel	
2	**Case**	Stainless steel	
3	**Ring**	Stainless steel	
4	**Socket**	Stainless steel	
5	**Dust cover**	Fluororubber/Silicon rubber	
6	**Rod end nut**	Stainless steel	

Ø 20 to Ø 63



Component Parts

No.	Description	Material	Note
1	**Stud**	Stainless steel (Thread parts)	Electroless nickel plated
2	**Case**	Stainless steel	
3	**Ring**	Chromium molybdenum steel	Electroless nickel plated
4	**Cap**	Carbon steel	Electroless nickel plated
5	**Dust cover**	Fluororubber/Silicon rubber	
6	**Set screw**	Carbon steel	
7	**Rod end nut**	Stainless steel	

Replacement Parts

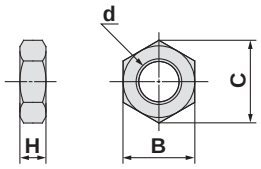
Dust cover

When the dust cover is damaged and deteriorated, order with the part number as shown below.

Model	Part no. for dust cover	
	Fluoro rubber	Silicon rubber
JS10	P21530511	P21530512
JS16	P21530521	P21530522
JS20	P2153151	P2153152
JS32	P2153251	P2153252
JS40	P2153351	P2153352
JS63	P2153451	P2153452

Rod end nunut

One rod end nut is supplied with the JS series. If additional nuts are needed, please order them using the part no. shown below.

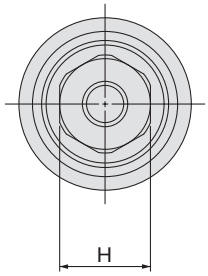


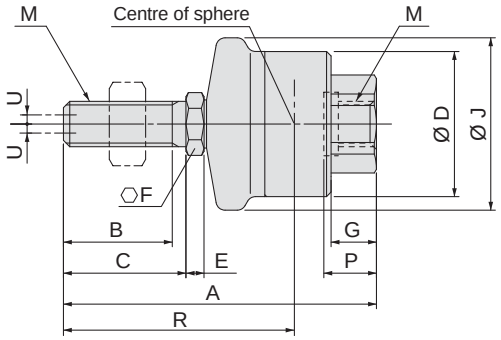
[mm]

Model	Order no.	d: Thread nominal size	H	B	C
JS10-4-070	DA00127	M4×0.7	3.2	7	8.1
JS16-5-080	DA00128	M5×0.8	4	8	9.2
JS20-8-125	DA00036	M8×1.25	5	13	15
JS32-10-125	DA00006	M10×1.25	6	17	19.6
JS40-14-150	DA00186	M14×1.5	8	22	25.4
JS63-18-150	DA00188	M18×1.5	11	27	31.2

Dimensions

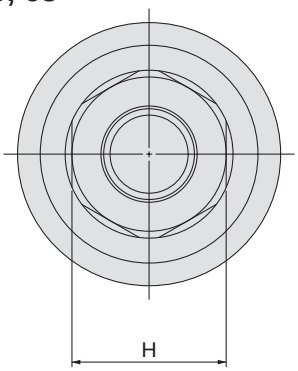
JS10, 16

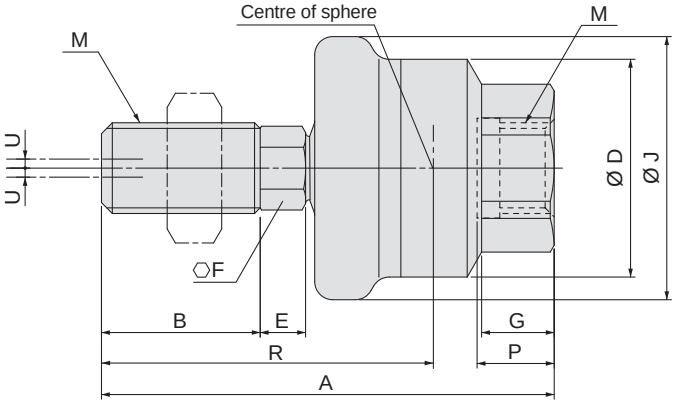




∗ Use the precision spanner for clock 4 mm in the case of mounting male thread of JS10.

JS20, 32, 40, 63





[mm]

Model	M	A	B	C	D	E	F	G	H	J	Centre of sphere R	Max. thread depth P	Allowable eccentricity U	Max. operating tension and compression force [N]	Weight [kg]
JS10-4-070	M4 x 0.7	26	8.5	9.5	12	1.5	4	4	7	14.4	17	4.7	0.5	80	0.01
JS16-5-080	M5 x 0.8	34.5	12	13.5	16	2	6	5	10	19	23	5.8	0.5	210	0.02
JS20-8-125	M8 x 1.25	43.9	15.5	—	21	4.5	7	7	13	24.8	29.9	7.3	0.5	1100	0.05
JS32-10-125	M10 x 1.25	49.5	17.5	—	24	5	8	8	17	29	33.5	8.5	0.5	2500	0.08
JS40-14-150	M14 x 1.5	60	18.5	—	31	5	11	11	22	38.4	38	11.6	0.75	6000	0.16
JS63-18-150	M18 x 1.5	74.5	23	—	41	7	14	13.5	27	49.2	47.5	14.3	1	11000	0.31

Made to Order: Individual Specifications

Made to Order

Please contact SMC for detailed dimensions, specifications and lead times.

Symbol

1 For Pneumatic Cylinders: For Ø 80, Ø 100 -X530

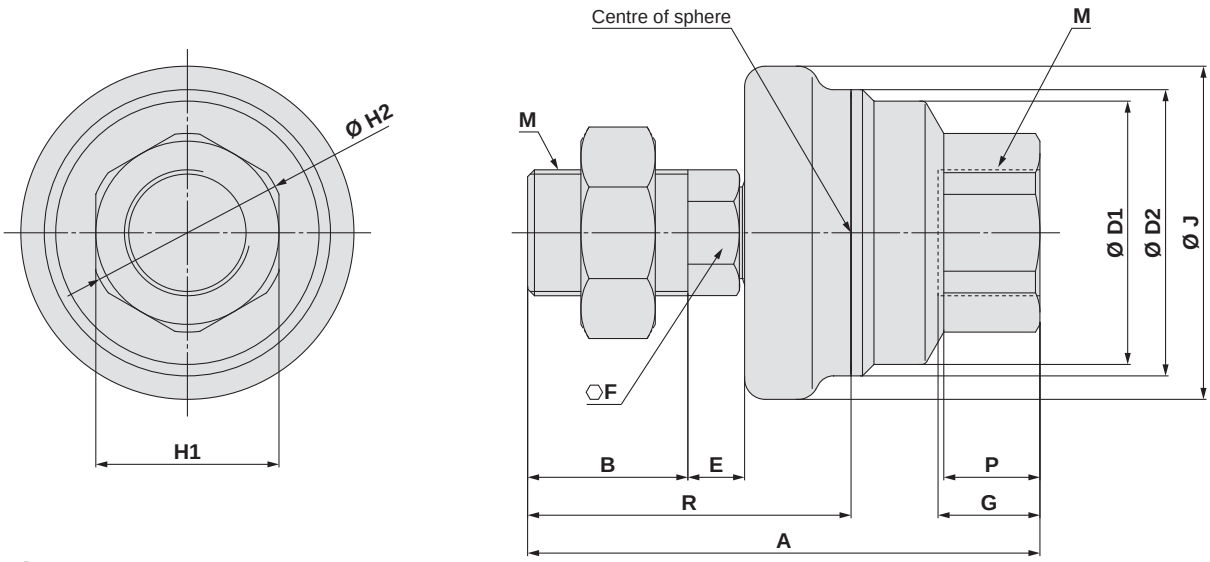
Applicable to the floating joint and stainless steel type JS series and used for pneumatic cylinders with bore sizes of Ø 80 and Ø 100.
∗ This product is dedicated to the pneumatic cylinders.

Model/Specifications

Model	Applicable cylinder				Maximum operating tensile and compressive force N	Allowable eccentricity U [mm]	Ambient temperature (°C)	Weight [kg]
	Bore size [mm] Note)	Nominal thread size	Dust cover material	Operating pressure				
JS80-22-150-X530	Ø 80	M22 x 1.5	Fluororubber	1 MPa or less	5000	1.25	– 5 to 70	0.58
JS80-22-150S-X530			Silicone rubber					
JS100-26-150-X530	Ø 100	M26 x 1.5	Fluororubber		7850	2		1.05
JS100-26-150S-X530			Silicone rubber					

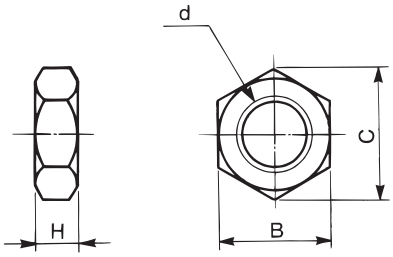
Note) Think of applicable bore size as a guide. For details, confirm the rod end thread diameter of a cylinder to be used in the catalogue.

Dimensions



Rod end nut

One rod end nut is supplied with the JS series. If additional nuts are needed, please order them using the part no. shown below.



[mm]

Model	Order no.	d: Nominal thread size	H	B	C
JS80-22-150(S)-X530	DA00243	M22 x 1.5	13	32	37
JS100-26-150(S)-X530	DA00189	M26 x 1.5	16	41	47.3

Dimensions

[mm]

Model	M	A	B	D1	D2	E	F	G	H1	H2	J	Centre of sphere R	Maximum thread depth P	Allowable eccentricity U	Maximum operating tensile and compressive force [N]	Weight [kg]
JS80-22-150(S)-X530	M22 x 1.5	89.5	28	46	50	99	19	14	32	34.7	57.2	56.5	16.8	1.25	5000	0.58
JS100-26-150(S)-X530	M26 x 1.5	110	34	55.5	59.5	11.4	24	19.5	41	44.4	66.2	68	21	2	7850	1.05

⚠ Safety Instructions

These safety instructions are intended to prevent hazardous situations and/or equipment damage. These instructions indicate the level of potential hazard with the labels of **"Caution**," **"Warning"** or **"Danger**." They are all important notes for safety and must be followed in addition to International Standards (ISO/IEC) [1], and other safety regulations.

⚠ **Caution:**	**Caution** indicates a hazard with a low level of risk which, if not avoided, could result in minor or moderate injury.
⚠ **Warning:**	**Warning** indicates a hazard with a medium level of risk which, if not avoided, could result in death or serious injury.
⚠ **Danger:**	**Danger** indicates a hazard with a high level of risk which, if not avoided, will result in death or serious injury.

1) ISO 4414: Pneumatic fluid power – General rules relating to systems.
ISO 4413: Hydraulic fluid power – General rules relating to systems.
IEC 60204-1: Safety of machinery – Electrical equipment of machines. (Part 1: General requirements)
ISO 10218-1: Manipulating industrial robots - Safety.
etc.

⚠ Warning

1. The compatibility of the product is the responsibility of the person who designs the equipment or decides its specifications.
Since the product specified here is used under various operating conditions, its compatibility with specific equipment must be decided by the person who designs the equipment or decides its specifications based on necessary analysis and test results. The expected performance and safety assurance of the equipment will be the responsibility of the person who has determined its compatibility with the product. This person should also continuously review all specifications of the product referring to its latest catalogue information, with a view to giving due consideration to any possibility of equipment failure when configuring the equipment.

2. Only personnel with appropriate training should operate machinery and equipment.
The product specified here may become unsafe if handled incorrectly. The assembly, operation and maintenance of machines or equipment including our products must be performed by an operator who is appropriately trained and experienced.

3. Do not service or attempt to remove product and machinery/ equipment until safety is confirmed.
1. The inspection and maintenance of machinery/equipment should only be performed after measures to prevent falling or runaway of the driven objects have been confirmed.
2. When the product is to be removed, confirm that the safety measures as mentioned above are implemented and the power from any appropriate source is cut, and read and understand the specific product precautions of all relevant products carefully.
3. Before machinery/equipment is restarted, take measures to prevent unexpected operation and malfunction.

4. Contact SMC beforehand and take special consideration of safety measures if the product is to be used in any of the following conditions.
1. Conditions and environments outside of the given specifications, or use outdoors or in a place exposed to direct sunlight.
2. Installation on equipment in conjunction with atomic energy, railways, air navigation, space, shipping, vehicles, military, medical treatment, combustion and recreation, or equipment in contact with food and beverages, emergency stop circuits, clutch and brake circuits in press applications, safety equipment or other applications unsuitable for the standard specifications described in the product catalogue.
3. An application which could have negative effects on people, property, or animals requiring special safety analysis.
4. Use in an interlock circuit, which requires the provision of double interlock for possible failure by using a mechanical protective function, and periodical checks to confirm proper operation.

⚠ Caution

1. The product is provided for use in manufacturing industries.
The product herein described is basically provided for peaceful use in manufacturing industries.
If considering using the product in other industries, consult SMC beforehand and exchange specifications or a contract if necessary.
If anything is unclear, contact your nearest sales branch.

Limited warranty and Disclaimer/Compliance Requirements

The product used is subject to the following "Limited warranty and Disclaimer" and "Compliance Requirements".Read and accept them before using the product.

Limited warranty and Disclaimer

1. The warranty period of the product is 1 year in service or 1.5 years after the product is delivered, whichever is first. [2] Also, the product may have specified durability, running distance or replacement parts. Please consult your nearest sales branch.
2. For any failure or damage reported within the warranty period which is clearly our responsibility, a replacement product or necessary parts will be provided. This limited warranty applies only to our product independently, and not to any other damage incurred due to the failure of the product.
3. Prior to using SMC products, please read and understand the warranty terms and disclaimers noted in the specified catalogue for the particular products.

2) Vacuum pads are excluded from this 1 year warranty.
A vacuum pad is a consumable part, so it is warranted for a year after it is delivered. Also, even within the warranty period, the wear of a product due to the use of the vacuum pad or failure due to the deterioration of rubber material are not covered by the limited warranty.

Compliance Requirements

1. The use of SMC products with production equipment for the manufacture of weapons of mass destruction (WMD) or any other weapon is strictly prohibited.
2. The exports of SMC products or technology from one country to another are governed by the relevant security laws and regulations of the countries involved in the transaction. Prior to the shipment of a SMC product to another country, assure that all local rules governing that export are known and followed.

⚠ Caution

SMC products are not intended for use as instruments for legal metrology.
Measurement instruments that SMC manufactures or sells have not been qualified by type approval tests relevant to the metrology (measurement) laws of each country.
Therefore, SMC products cannot be used for business or certification ordained by the metrology (measurement) laws of each country.

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