

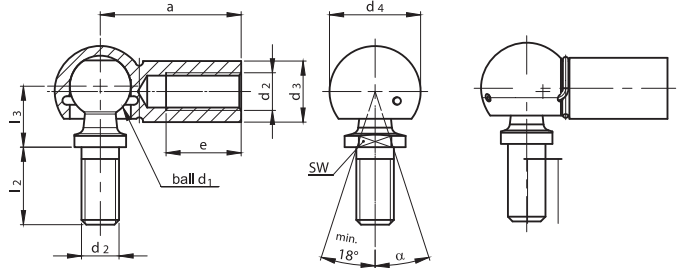
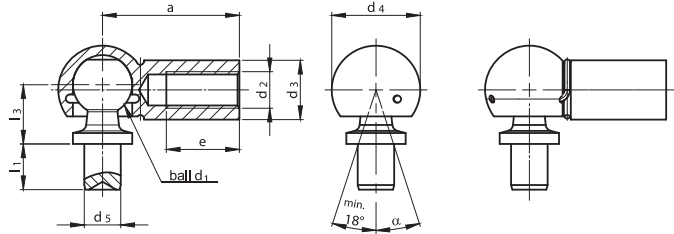


DIN 71802 form B with rivet pin without safety clips
order example: angle joints DIN 71802 B 10 x 4,5

DIN 71802 form C with threaded pin without safety clips
order example: angle joints DIN 71802 C 8 - M 5

DIN 71802 form BS with rivet pin and safety clips
order example: angle joints DIN 71802 BS 13 x 10

DIN 71802 form CS with threaded pin and safety clips
order example: angle joints DIN 71802 CS 16 - M 10



ball d1 h9	thread d2	a ±0.3	d3	d4	d5 h11	e min.	l2 ±0.3	l3 ±0.3	pin length l1 ±0.2	SW h14	Weight kg per 1000 pcs	
											C / CS	B / BS
8	M 5	22	8	12.8	5	10.2	10.2	9	4	7	15.2	12.85
									7.5			13.35
10	M 6	25	10	14.8	6	11.5	12.5	11	4.5	8	25.2	21.3
									8			22
13	M 8	30	13	19.3	8	14	16.5	13	5	11	53.1	43.1
									10			45
16	M 10 M 12	35	16	24	10	15.5	20	16	6	13	103.8	82.3
									13			86.6
19	M 14×1.5 M 14×2 M 16	45	22	30	14	21.5	28	20	12	16	220.9	181
									18			188.7

一、备注

- 1) A、B、C系列座体无外卡，AS、BS、CS系列座体带外卡
- 2) 左牙可适用于座体
- 3) C、CS系列球头销有扳手平面
- 4) 可选择在座体处铣扳手平面
- 5) 可选择是否需防尘罩

二、材料

- 1) 球头销：碳钢 1045
座体：碳钢 1020
内卡、外卡：弹簧钢
- 2) 可选用不锈钢

三、表面处理

电镀白锌或彩锌

Note

- A、B、C type without safety clips on the ball socket,
- AS、BS、CS type with safety clips on the ball socket
- Left-hand thread in the ball socket possible
- Spanner width for type C and CS on the ball stud
- The manufacturer reserves the right to supply the ball socket with or without spanner surface
- With or without sealing caps upon request

Material

- Ball stud (ball pins): 1045 carbon steel, 55HRC, 303 stainless steel
- Housing (ball cups): 1020 carbon steel, 55HRC, 303 stainless steel
- Clip: spring steel, stainless steel

Alternative for all angle joint versions: stainless steel

Surface protection

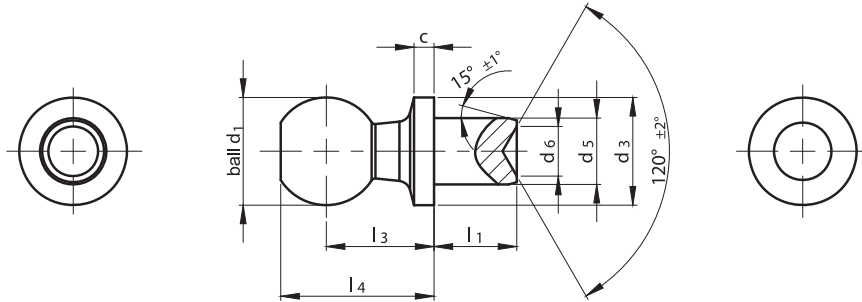
- electroplated galvanized, passivated in white-blue or yellow
- unplated





DIN 71803 form B with rivet pin order

example: ball pins DIN 71803 B 10 x 4,5



materials

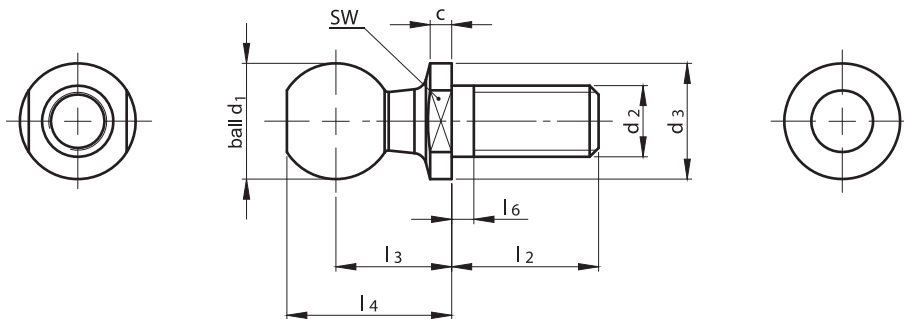
- steel with a minimum tensile strength of R_m 600 N/mm²; ball hardened, degree of hardness at least 52 HRC or 550 HV 30, depth of hardening at least 1 mm (no full hardening permitted when $d_1 > 13$ mm)
- 1045 carbon steel, 55HRC
- 303 stainless steel

surface

- unplated
- zinc plated

DIN 71803 form C with threaded pin

order example: ball pins DIN 71803 C 13 - M 8



materials

- steel with a minimum tensile strength of R_m 600 N/mm²; ball hardened, degree of hardness at least 52 HRC or 550 HV 30, depth of hardening at least 1 mm (no full hardening permitted when $d_1 > 13$ mm)
- 1045 carbon steel, 55HRC
- 303 stainless steel

surface

- unplated
- zinc plated

ball d_1 h9	thread d_2	pin length l_1 ± 0.2	C	a ± 0.3	d_3 h14	d_4	d_5 h11	l_2 ± 0.3	l_3 ± 0.3	l_4 ± 0.3	l_6 max.	SW h14	Weight kg per 1000 pcs	
													A/ C	B
8	M 5	4	2	22	8	12.8	5	10.2	9	12.5	4	7	4.55	3.85
		7.5											4.35	
10	M 6	4.5	2.2	25	10	14.8	6	12.5	11	15.5	4	8	8.5	7.1
		8											7.8	
13	M 8	5	2.4	30	13	19.3	8	16.5	13	18.5	5.3	11	17.7	14.2
		10											16	
16	M 10 M 12	6	2.7	35	16	24	10	20	16	23	7.3	13	35.1	23.5
		13											29.6	
19	M 14×1.5 M 14×2 M 16	12	3	45	19	30	14	28	20	28.5	10.8	16	71.2	56.2
		18											63.7	

一、材料

- 1) 碳钢 1045
- 2) 可选用不锈钢

1. Material

- 1) Carbon steel 1045
- 2) Alternative for all angle joint versions: stainless steel

二、钢球d1硬度不小于HRC52, 硬化深度不小于1mm

2. Ball d1 hardness: Min. HRC52
Hardening depth: Min. 1mm

三、表面处理

电镀白锌或彩锌

3. Surface protection

Electroplated galvanized, passivated in white-blue or yellow

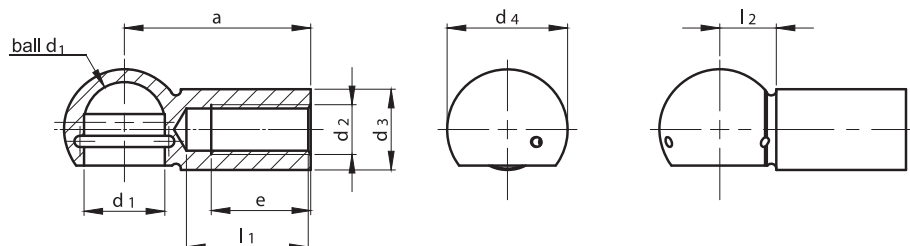


DIN 71805 form A with snap ring

order example: ball cups DIN 71805 A 10 - M 6

DIN 71805 form B with snap ring, hole and flute for safety clips

order example: ball cups DIN 71805 B 13 - M 8



materials

- steel with a minimum tensile strength of R_m 500 N/mm²
- 1020 carbon steel
- 303 stainless steel

surface

- unplated
- zinc plated

一、材料

1) 碳钢 1045

2) 可选用不锈钢

二、可选择铣扳手平面

三、表面处理:电镀白锌或彩锌

ball d ₁ h9	thread d ₂	a ±0,3	d ₃ ±0,5	d ₄ ±0,5	e min.	l ₁ max.	l ₂ ±0,4	weight approx. kg per1000 pcs.	
								form A	form B
6	M 4	22	7	10,6	10,2	15	-	7,3	-
8	M 5	22	8	12,8	10,2	15	6,3	9,0	8,8
10	M 6	25	10	14,8	11,5	17	7,0	14,2	14,1
13	M 8	30	13	19,3	14,0	20	9,1	29,0	28,8
16	M 10 M 12	35	16	24,0	15,5	22	11,4	57,0	56,8
19	M 14 x 1,5 M 14 M 16	45	22	30,0	21,5	28	12,5	125,0	124,8

optional features

- left-hand threaded ball cups; indication by LH; e.g. B 10 - M 6 LH
- easy moving version; indication by L; e.g. AL 13 - M 8
- ball cups hardened; indication by hardened; e.g. B 13 - M 8 hardened
- ball cups with spanner flat or hexagon head
- ball cups with external thread
- double ball cups
- further special options available on request



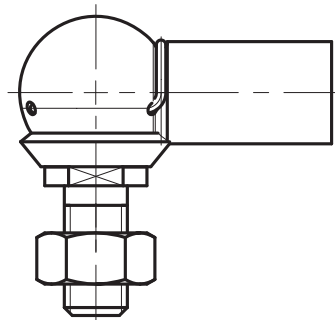
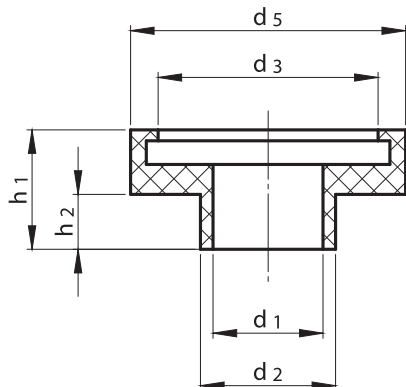


protection caps

order example: protection caps DK 13 (protection caps loose)

angle joints with protection caps

order example: angle joints CS 10 - M 6 zinc plated white with protection caps mounted



materials

- neoprene

operation range

- protections caps can be used from -30° to +110° C (up to +140° C for a short time)

材质

氯丁橡胶

工作温度

-30° to +110° C

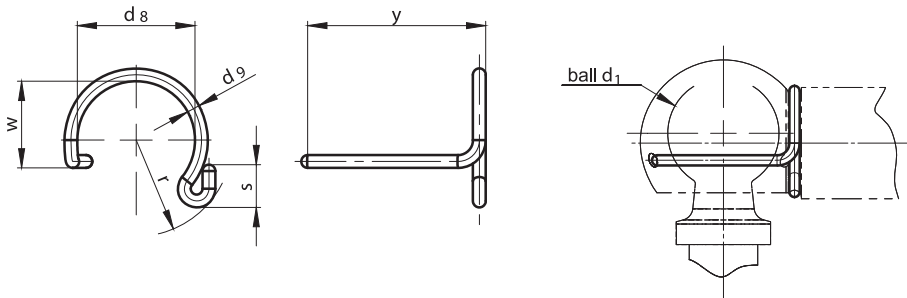
size	d1	d2	d3	d5	h1	h2	Weight kg per 1000 pcs
8	4,0	5,4	9,0	11,8	4,6	1,5	0,30
10	5,5	6,9	10,5	13,4	6,6	3,5	0,41
13	7,0	8,6	14,0	17,5	7,6	3,5	0,86
16	9,0	10,5	17,5	22,0	8,6	4,5	1,39
19	11,0	12,6	21,0	25,5	12,7	7,0	2,33

remarks

- Size and dimension of the angle joints DIN 71802 can be delivered with mounted protection caps if requested. Protection caps are also available as a separate component or mounted on ball pins (DIN 71803).
- The protection caps protect angle joints from dirt or water spray and they have been tried and tested in very dirty and dusty environments.

Ball Joint Clips (safety Clips) DIN71805 Form S

外卡和内卡 DIN 71805 S



materials

- spring steel wire / stainless steel wire

operation range

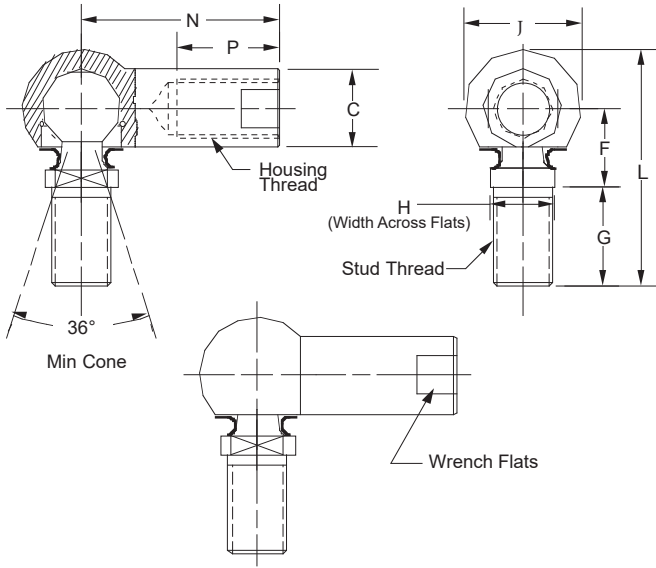
- protections caps can be used from -30° to +110° C (up to +140° C for a short time)

材质

弹簧钢/不锈钢

ball d ₁	d ₈		d ₉ 	r max.	w ≡	y		S +0,3 0	weight approx. kg per1000 pcs.
	tolerances					tolerances			
8	7,0	⁰ _{-0,25}	1,0	6,0	6,5	12,0	^{+0,4} ₀	2,5	0,21
10	8,7	⁰ _{-0,25}	1,0	7,0	7,7	12,5	^{+0,4} ₀	3,0	0,24
13	11,0	⁰ _{-0,35}	1,2	9,0	9,5	15,7	^{+0,6} ₀	4,0	0,46
16	13,0	⁰ _{-0,40}	1,4	10,5	11,0	19,0	^{+0,6} ₀	4,0	0,77
19	20,0	⁰ _{-0,50}	1,5	14,0	16,5	24,0	^{+0,8} ₀	5,0	1,10

DMC: Ball Joint, DIN Metric, Internal Clip



Part Number		Thread	C	F	G	H	J	N	P	
Carbon Steel Zinc Plated	Stainless Steel									
DMC-5	SDMC-5	M5 x 0.80	8	9	10.2	8	12.8	22	10.2	
DMC-6	SDMC-6	M6 x 1.00	10	11	12.5	10	14.8	25	11.5	
DMC-8	SDMC-8	M8 x 1.25	13	13	16.5	13	19.3	30	14	
DMC-10	SDMC-10	M10 x 1.50	16	16	20	16	24	35	15.5	
DMC-12	SDMC-12	M12 x 1.75	16	16	20	16	24	35	15.5	

一、备注

- 1) 内卡
- 2) 左牙可适用于座体
- 3) 座体处铣扳手平面
- 4) 带防尘罩

二、材料

- 1) 球头销: 碳钢 1045
座体: 碳钢 1020
内卡: 弹簧钢
- 2) 可选用不锈钢

三、表面处理

电镀白锌或彩锌

Note

- Internal clips on the ball socket,
- Left-hand thread in the ball socket possible
- socket with spanner plat
- With sealing caps

Material

- Ball stud (ball pins): 1045 carbon steel, 55HRC, 303 stainless steel
- Housing (ball cups): 1020 carbon steel, 55HRC, 303 stainless steel
- Clip: spring steel, stainless steel

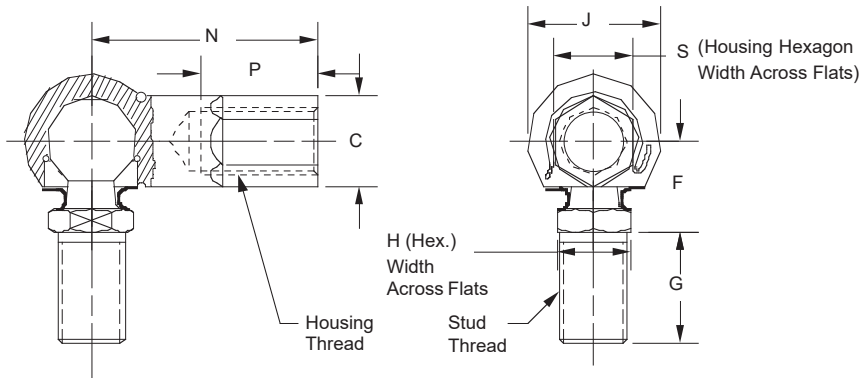
Surface protection

- electroplated galvanized, passivated in white-blue or yellow
- unplated

SIMILAR ANGLE JOINT DIN71802



DMH: Ball Joint, DIN Metric, Hex Shaped Barrel, External Retaining Clip



Left Hand Threads, add "L" as in DMHL-5

Part Number		Thread	C	F	G	H	J	N	P	S
Carbon Steel Zinc Plated	Stainless Steel									
DMH-5	SDMH-5	M5 x 0.80	8	9	10.2	8	12.8	22	10.2	7
DMH-6	SDMH-6	M6 x 1.00	10	11	12.5	10	14.8	25	11.5	9
DMH-8	SDMH-8	M8 x 1.25	13	13	16.5	13	19.3	30	14	11
DMH-10	SDMH-10	M10 x 1.50	16	16	20	16	24	35	15.5	13
DMH-12	SDMH-12	M12 x 1.75	16	16	20	16	24	35	15.5	13

一、备注

- 1) 内卡
- 2) 左牙可适用于座体
- 3) 座体六角
- 4) 带防尘罩

二、材料

- 1) 球头销: 碳钢 1045
座体: 碳钢 1020
外卡: 弹簧钢
- 2) 可选用不锈钢

三、表面处理

电镀白锌或彩锌

Note

- Internal clips on the ball socket,
- Left-hand thread in the ball socket possible
- hex shaped barrel socket
- With sealing caps

Material

- Ball stud (ball pins): 1045 carbon steel, 55HRC, 303 stainless steel
- Housing (ball cups): 1020 carbon steel, 55HRC, 303 stainless steel
- Clip: spring steel, stainless steel

Surface protection

- electroplated galvanized, passivated in white-blue or yellow
- unplated

SIMILAR ANGLE JOINT DIN71802





DIN 71802 form B with rivet pin without safety fastening

DIN 71802 form C with threaded pin without safety fastening

materials

ball cups

- POM / PA66

ball pins

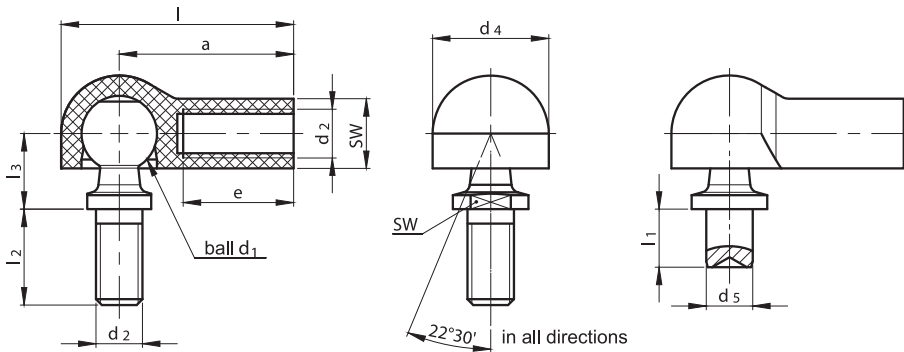
- stainless steel 303
- (dimensions of ball pins acc. DIN 71803, ball not hardened)

surface ball pins

- unplated
- zinc plated

operation range

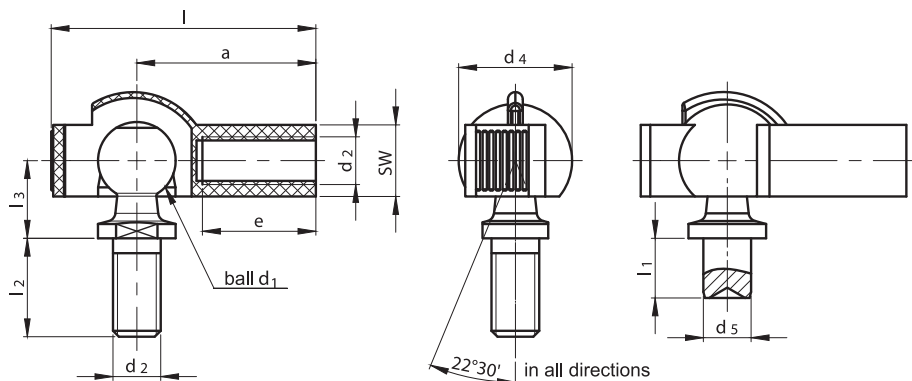
- -40° to 100°C, short-time duty up to 120°C



ball d ₁	pin length l ₁ ±0,2	thread d ₂	a ±0,5	d ₄ ±0,3	d ₅ h11	e min.	l ±0,5	l ₂ ±0,5	l ₃ ±0,3	SW ball cup	weight approx. kg per1000 pcs.	
											form C	form B
6	3,5	M 4	17	10	4	11	22	8,0	8,5	7	-	2,93
8	4,0	M 5	22	14	5	14	29	10,2	9,0	8	7,05	6,35
	7,5											6,85
10	4,5	M 6	25	16	6	16	33	12,5	11,0	9	12,22	10,82
	8,0											11,52
13	5,0	M 8	30	20	8	19	40	16,5	13,0	12	24,50	20,80
	10,0											22,60

DIN 71802 form BS with rivet pin with safety fastening

DIN 71802 form CS with threaded pin with safety fastening



materials

ball cups

- POM / PA66

ball pins

- stainless steel 303
- (dimensions of ball pins acc. DIN 71803, ball not hardened)

surface ball pins

- unplated
- zinc plated

operation range

- -40° to 100°C,

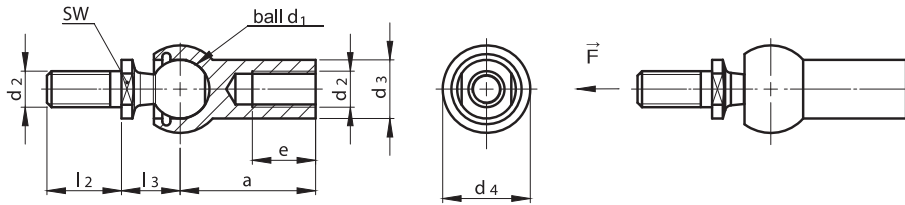
ball d ₁	pin length l ₁ ±0,2	thread d ₂	a ±0,5	d ₄ ±0,3	d ₅ h11	e min.	l ±0,5	l ₂ ±0,3	l ₃ ±0,3	SW ball cup	weight approx. kg per1000 pcs.	
											form CS	form BS
6	3,5	M 4	17	10,0	4	10	24,5	8,0	8,5	7	-	3,00
8	4,0	M 5	22	12,5	5	12	32,0	10,2	9,0	8	6,05	5,35
	7,5											5,85
10	4,5	M 6	25	15,0	6	14	36,5	12,5	11,0	10	11,90	10,50
	8,0											11,20
13	5,0	M 8	30	19,0	8	17	44,5	16,5	13,0	12	24,40	20,90
	10,0											22,70





DIN 71802 form C with threaded pin

order example: axial joints DIN 71802 C 13 - M 8



materials

ball cups

- steel with a minimum tensile strength of R_m 500 N/mm²
- stainless steel 1.4305
- stainless steel 1.4571

ball pins

- steel with a minimum tensile strength of R_m 600 N/mm²; ball hardened, degree of hardness at least 52 HRC or 550 HV 30, depth of hardening at least 1 mm
- stainless steel 1.4305
- stainless steel 1.4571

surface

- unplated
- zinc plated

ball	thread								pull-out force F in N	weight approx. kg per 1000 pcs.
d_1 h9	d_2	a ±0,3	d_3 ±0,5	d_4 ±0,5	e min.	l_2 ±0,3	l_3 ±0,3	SW h9		
8	M 5	22	8	12,8	10,2	10,2	9	7	30	15,2
10	M 6	25	10	14,8	11,5	12,5	11	8	40	25,2
13	M 8	30	13	19,3	14,0	16,5	13	11	60	53,1
16	M 10 M 12	35	16	24,0	15,5	20,0	16	13	80	103,8
19	M 14 x 1,5 M 14 M 16	45	22	30,0	21,5	28,0	20	16	100	220,9

Angle joints with hexagon nut DIN 934 loose, or mounted if requested.

一、备注

- 1) 左牙可适用于座体
- 2) 可选择在座体处铣扳手平面
- 3) 可选择是否需防尘罩

二、材料

- 1) 球头销: 碳钢 1045
座体: 碳钢 1020

内卡、外卡: 弹簧钢

- 2) 可选用不锈钢

三、表面处理

电镀白锌或彩锌

1.Note

- 1) Left-hand thread in the ball socket possible
- 2) Ball socket available with or without spanner surface
- 3) With or without sealing caps upon request

2.Material

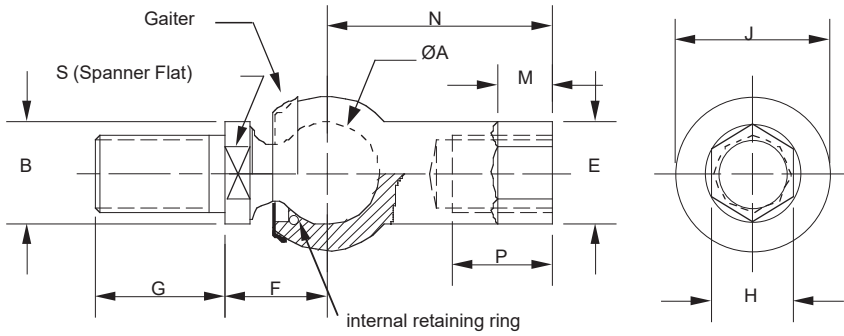
Ball stud: 1045 carbon steel ,303 stainless steel
Housing: carbon steel1020,,303 stainless steel
Clip: spring steel,stainless steel

3.Surface protection

zince plated or unplated (stainless steel)
Electroplated galvanized, passivated in white-blue or yellow

IBJ METRIC SERIES BALL JOINT

直杆形球接 IBJ



Part No	Thread ISO A	A	B	E	F	G	H	J	M	N	P	S	Max Pull Newtons	Weight Per 100 in Kgs
IBJ 5	M5 x 0.8	8	8	8	9	10.2	7	12.8	5	22	10.2	7	450	1.4
IBJ 6	M6 x 1.0	10	10	10	11	12.5	9	14.8	7	25	11.5	8	600	2.3
IBJ 8	M8 x 1.25	13	13	13	13	16.5	11	19.3	9	30	14	11	900	4.7
IBJ 10	M10 x 1.5	16	16	16	16	20	13	24	9	35	15.5	13	1200	9.2
IBJ 12	M12 x 1.75	16	16	16	16	20	13	24	9	35	15.5	13	1200	9.2
IBJ 14	M14 x 1.5	19	19	19	20	28	19	30	12	45	21.5	17	1500	19.7
IBJ 14/1	M14 x 2.0	19	19	19	20	28	19	30	12	45	21.5	17	1500	19.7

1、材料

座体：碳钢1020, 303 不锈钢
 球杆：碳钢1020, 303不锈钢
 防尘罩：丁腈橡胶
 可选择不锈钢

2、表面处理

电镀三价铬蓝白锌或普通彩锌

3、加润滑油脂，摆动灵活

4、所有尺寸为英制

1.Material

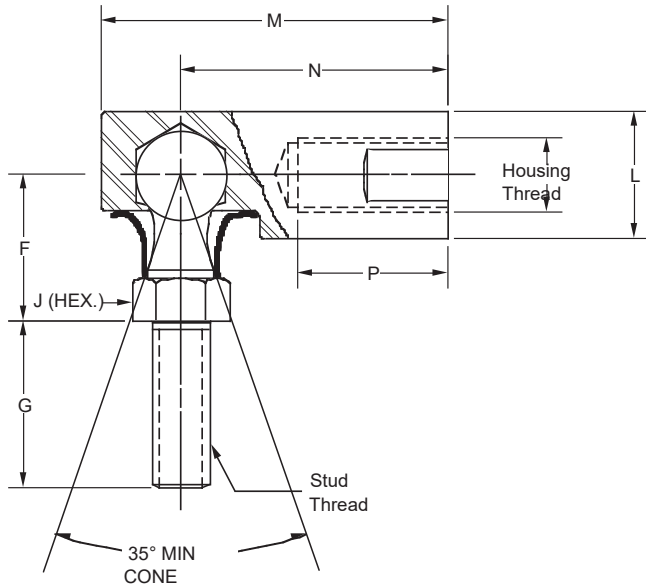
Housing: Low Carbon Steel 1020, 303 stainless steel
 Ball stud: Carbon Steel 1045, 303 stainless steel
 Sealing cap: Neoprene Rubber
 Alternative: Stainless Steel

2.Surface protection

Electroplated galvanized, passivated in white-blue or yellow

3.Filled with lubricant and circle swing agilely without any block

4.Unless otherwise specified, all dimensions are in inches



型号	尺寸 inch										最小轴向力	最小径向力
Part No.	Dimension										Min Pull Test(lb)	Min Shear (lb)
	housing thread	stud thread	L	G	F	P	N	M	S	J		
ES187	10-32-2B	10-32-2A	0.375	0.438	0.438	0.438	0.875	1.063	0.313	0.313	400	400
ES250	1/4-28-2B	1/4-28-2A	0.438	0.563	0.469	0.5	0.969	1.219	0.313	0.375	500	500
ES312	5/16-24-2B	5/16-24-2A	0.5	0.688	0.531	0.563	1.125	1.406	0.394	0.438	650	800
ES375	3/8-24-2B	3/8-24-2A	0.625	0.875	0.688	0.75	1.375	1.688	0.5	0.5	1000	800
ES438	7/16-20-2B	7/16-20-2A	0.75	1.125	0.875	1	1.938	2.375	0.625	0.625	2000	2400
ES500	1/2-20-2B	1/2-20-2A	0.75	1.125	0.875	1	1.938	2.375	0.625	0.625	2000	2500

一、材料

- 座体：碳钢1045
- 球杆：碳钢1045
- 防尘罩：氯丁橡胶
- 挡圈：弹簧钢
- 可选择不锈钢
- 座体可加工左螺纹—ESL

二、表面处理

电镀蓝白锌或普通彩锌

三、加润滑油脂，摆动灵活

四、所有尺寸为英制

1.Material

- Housing: Carbon Steel 1045
- Ball stud: Carbon Steel 1045
- Sealing cap: Neoprene Rubber
- Internal Ring: Spring Steel
- Alternative: Stainless Steel
- Housing can be left hand threaded, eg:ESL

2.Surface protection

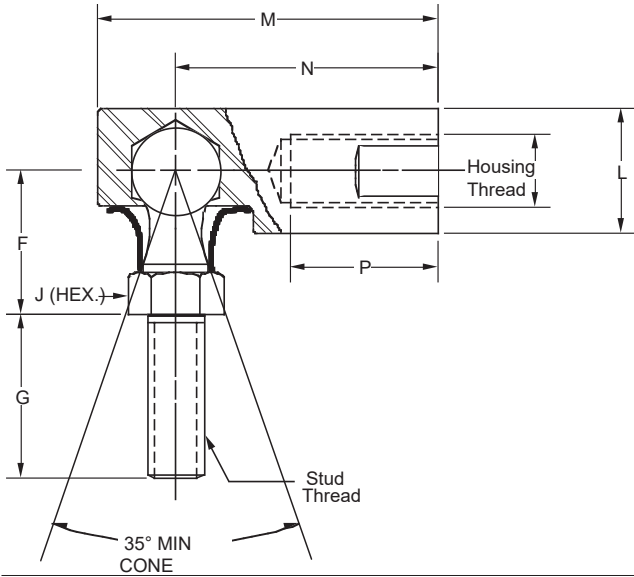
Electroplated galvanized, passivated in white-blue or yellow

3.Filled with lubricant and circle swing agilely without any block

4.Unless otherwise specified, all dimensions are in inches

Ball joints FS Series

球头接头 FS 系列



型号	尺寸 inch											最小轴向力	最小径向力
Part No.	Dimension											Min Pull Test(lb)	Min Shear (lb)
	housing thread	stud thread	L	G	F	P	N	M	S	h	J		
FS187	10-32-2B	10-32-2A	0.438	0.438	0.469	0.438	0.969	1.219	0.313	0.125	0.375	1000	500
FS250	1/4-28-2B	1/4-28-2A	0.438	0.563	0.469	0.5	0.969	1.219	0.313	0.125	0.375	1000	700
FS312	5/16-24-2B	5/16-24-2A	0.5	0.688	0.531	0.563	1.125	1.406	0.394	0.156	0.438	1575	900
FS375	3/8-24-2B	3/8-24-2A	0.625	0.675	0.688	0.75	1.375	1.688	0.5	0.188	0.5	1700	1700
FS500	1/2-20-2B	1/2-20-2A	0.75	1.125	0.875	1	1.938	2.375	0.625	0.25	0.625	1900	2700

一、材料

- 座体：碳钢1045
- 球杆：碳钢1045
- 防尘罩：氯丁橡胶
- 挡圈：弹簧钢
- 可选择不锈钢
- 座体可加工左螺纹—FSL

1.Material

- Housing: Carbon Steel 1045
- Ball stud: Carbon Steel 1045
- Sealing cap: Neoprene Rubber
- Internal Ring: Spring Steel
- Alternative: Stainless Steel
- Housing can be left hand threaded, eg:FSL

二、表面处理

- 电镀蓝白锌或普通彩锌

2.Surface protection

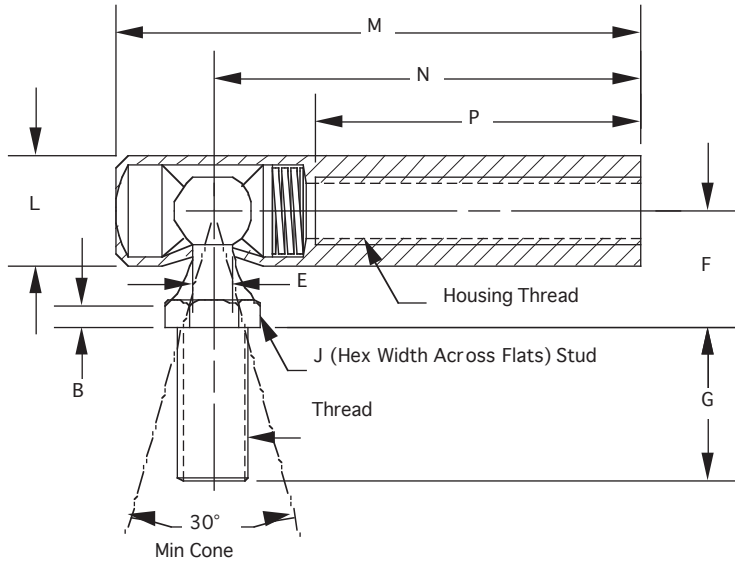
- Electroplated galvanized, passivated in white-blue or yellow

三、加润滑油脂，摆动灵活

3.Filled with lubricant and circle swing agilely without any block

四、所有尺寸为英制

4.Unless otherwise specified, all dimensions are in inches



SBJ (SPRING TENSIONED BALL STUD)

Steel Construction, Zinc Plated

A spring, located inside the housing, perpendicular to the ball stud ball head, applies a gentle force to the stud



型号	尺寸 inch										
Part No.	Dimension										
	housing thread	bolt thread	B	E	F	G	J	L	M	N	P
SBJ-3	10-32-2B	10-32-2A	0.125	0.135	0.406	0.437	0.312	0.375	1.25	0.875	0.437
SBJ-4	1/4-28-2B	1/4-28-2A	0.125	0.151	0.469	0.562	0.375	0.437	1.375	0.969	0.5
SBJ-5	5/16-24-2B	5/16-24-2A	0.156	0.182	0.531	0.687	0.437	0.5	1.562	1.125	0.625
SBJX-3	10-32-2B	10-32-2A	0.125	0.135	0.406	0.437	0.312	0.375	1.812	1.437	1.062
SBJX-4	1/4-28-2B	1/4-28-2A	0.125	0.151	0.469	0.562	0.375	0.437	2.25	1.843	1.437
SBJX-5	5/16-24-2B	5/16-24-2A	0.156	0.182	0.531	0.687	0.437	0.5	2.375	1.937	1.469

1、材料

座体：碳钢1020

球杆：碳钢1020

弹簧：不锈钢

可选择不锈钢

2、表面处理

电镀蓝白锌或普通彩锌

3、加润滑油脂，摆动灵活

4、所有尺寸为英制

1.Material

Housing: Low Carbon Steel 1020

Ball stud: Low Carbon Steel 1020

Spring: Stainless Steel

Alternative: Stainless Steel

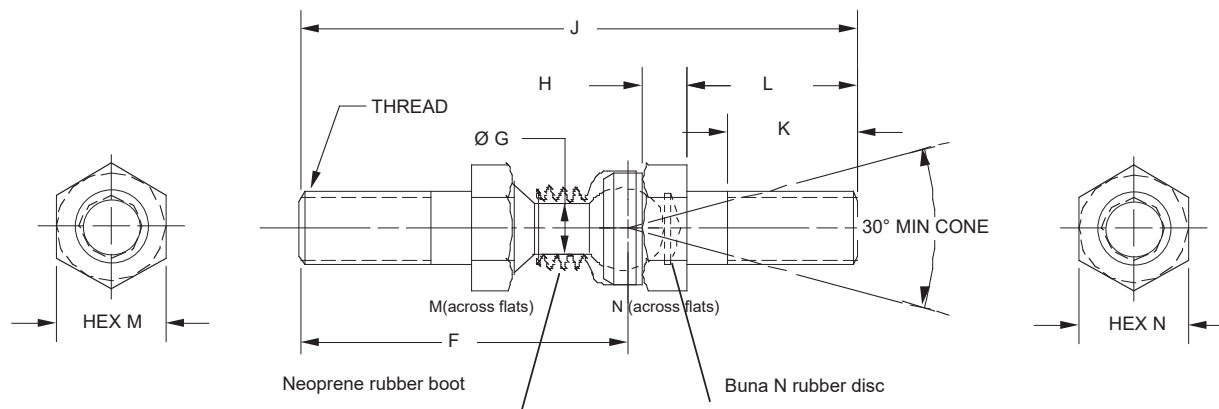
2.Surface protection

Electroplated galvanized, passivated in white-blue or yellow

3.Filled with lubricant and circle swing agilely without any block

4.Unless otherwise specified, all dimensions are in inches

MMIL (MALE-MALE, INLINE)



型号	英制尺寸 inch Dimension										最小轴向力
Part No.	threads	B	F	G	H	J	K	L	M	N	Min Pull Test
											(lb)
MMIL190	10-32-2A	0.251	1.276	0.156	0.172	2.09	0.5	0.56	0.313 0.302	0.438 0.428	600
MMIL250	1/4-28-2A	0.345	1.584	0.189	0.172	2.625	0.688	0.75	0.438 0.428	0.438 0.428	800
MMIL312	5/16-24-2A	0.403	1.845	0.221	0.187	3	0.781	0.841	0.438 0.428	0.500 0.489	800
MMIL375	3/8-24-2A	0.491	2.13	0.27	0.218	3.5	0.938	1	0.500 0.489	0.625 0.612	800
MMIL500	1/2-20-2A	0.616	2.51	0.356	0.312	4.312	1.25	1.31	0.625 0.612	0.750 0.736	2000

1、材料

- 座体：碳钢1020
- 球杆：碳钢1020
- 防尘罩：丁腈橡胶
- 橡胶垫圈：氟丁橡胶
- 可选择不锈钢

2、表面处理

电镀蓝白锌或普通彩锌

3、加润滑油脂，摆动灵活

4、所有尺寸为英制

1.Material

- Housing: Low Carbon Steel 1020
- Ball stud: Low Carbon Steel 1020
- Sealing cap: Neoprene Rubber
- Rubber Disc: Buna N Rubber
- Alternative: Stainless Steel

2.Surface protection

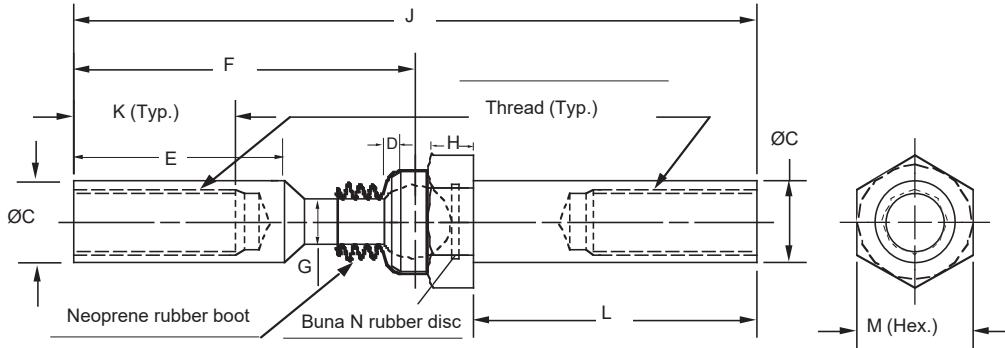
Electroplated galvanized, passivated in white-blue or yellow

3.Filled with lubricant and circle swing agilely without any block

4.Unless otherwise specified, all dimensions are in inches



FF & FFM (FEMALE-FEMALE INLINE)



型号	英制尺寸												最小轴向力
Part No.	inch Dimension												Min Pull Test
	THREAD	BALL	C	D	E	F	G	H	J	K	L	M	(lb)
FF187	10-32-2B	0.251	0.312	0.03	0.609	1.045	0.156	0.172	2.09	0.5	0.833	0.437	600
FF250	1/4-28-2B	0.345	0.375	0.05	0.812	1.313	0.189	0.172	2.625	0.688	1.053	0.5	900
FF312	5/16-24-2B	0.403	0.437	0.06	0.937	1.5	0.221	0.187	3	0.781	1.205	0.562	1200
FF375	3/8-24-2B	0.491	0.562	0.075	1.125	1.75	0.27	0.218	3.5	0.938	1.395	0.688	1500
FF500	1/2-20-2B	0.616	0.75	0.085	1.406	2.166	0.356	0.312	4.312	1.25	1.692	0.875	1800
FF625	5/8-18-2B	0.718	0.875	0.09	1.625	2.625	0.437	0.387	5.25	1.5	2.078	1	2100

型号	公制尺寸												最小轴向力
Part No.	metric Dimension												Min Pull Test
	THREAD	BALL	C	D	E	F	G	H	J	K	L	M	(lb)
FFM6	M6 X 1	8.763	9.525	1.27	20.6248	33.3502	4.8006	4.3688	66.675	17.4752	26.7462	12.7	900
FFM8	M8 X 1.25	10.2362	11.0998	1.524	23.7998	38.1	5.6134	4.7498	76.2	19.8374	30.607	14.2748	1200
FFM10	M10 X 1.5	12.4714	14.2748	1.905	28.575	44.45	6.858	5.5372	88.9	23.8252	35.433	17.4752	1500
FFM12	M12 X 1.75	15.6464	19.05	2.159	35.7124	55.0164	9.0424	7.9248	109.5248	31.75	42.9768	22.225	1800

1、材料

- 座体：碳钢1020
- 球杆：碳钢1020
- 防尘罩：丁腈橡胶
- 橡胶垫圈：氯丁橡胶
- 可选择不锈钢

2、表面处理

电镀三价铬蓝白锌或普通彩锌

3、加润滑油脂，摆动灵活

4、所有尺寸为英制

1.Material

- Housing: Low Carbon Steel 1020
- Ball stud: Low Carbon Steel 1020
- Sealing cap: Neoprene Rubber
- Rubber Disc: Buna N Rubber
- Alternative: Stainless Steel

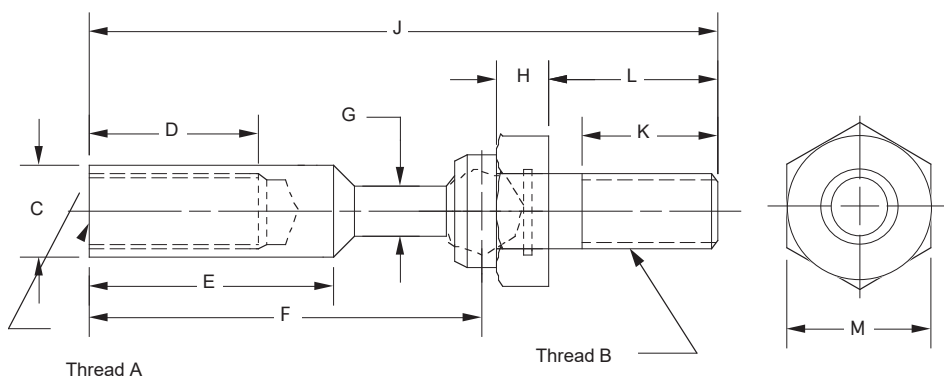
2.Surface protection

Electroplated galvanized, passivated in white-blue or yellow

3.Filled with lubricant and circle swing agilely without any block

4.Unless otherwise specified, all dimensions are in inches

FMIL (FEMALE-MALE, INLINE)



Part No.	Thread A	Thread B	C	D	E	F	G	H	J	K	L	M
FMIL250	1/4-28-2A	1/4-28-2B	0.312	0.56	0.81	1.31	0.169	0.172	2.09	0.5	0.56	0.4375
FMIL250C	1/4-20-2A	1/4-20-2B	0.312	0.56	0.81	1.31	0.169	0.172	2.09	0.5	0.56	0.4375
FMIL312	5/16-24-2A	5/16-24-2B	7/16 hex	0.725	0.975	1.38	0.208	0.172	2.4	0.688	0.75	0.4375

1、材料

座体：碳钢1020
球杆：碳钢1045
防尘罩：氯丁橡胶
橡胶垫圈：丁腈橡胶
可选择不锈钢

1.Material

Housing: Low Carbon Steel 1020
Ball stud: Carbon Steel 1045
Sealing cap: Neoprene Rubber
Rubber Disc: Buna N Rubber
Alternative: Stainless Steel

2、表面处理

电镀三价铬蓝白锌或普通彩锌

2.Surface protection

Electroplated galvanized, passivated in white-blue or yellow

3、加润滑油脂，摆动灵活

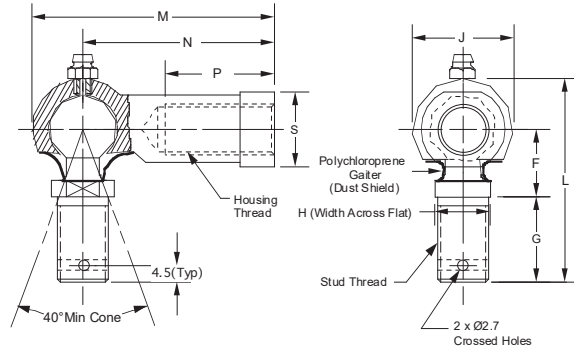
3.Filled with lubricant and circle swing agilely without any block

4、所有尺寸为英制

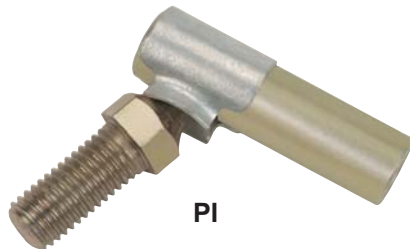
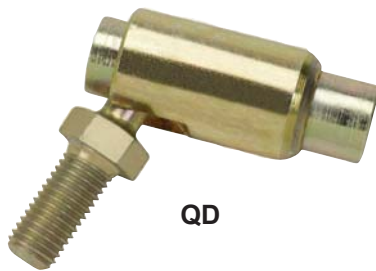
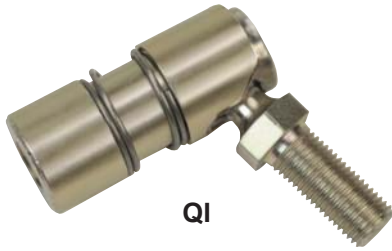
4.Unless otherwise specified, all dimensions are in inches

JWSB

Steel Housing, Plated Zinc Yellow
Grease Zerk



Part#	Thread	Stud Thread	F	G	H	J	M	N	P	S
JWSB-M10	M10 x 1.25 RH	M10 x 1.25 RH	21	25.0	12.6	25.5	54	42	24	14.5
JWSBL-M10	M10 x 1.25 LH	M10 x 1.25 RH	21	25.0	12.6	25.5	54	42	24	14.5



Suitable for applications requiring quick disconnect capabilities, the QI/QD/PI Series offers three different styles of fast assembly/disassembly ball joints.

- QD Series: spring loaded sleeve, smaller ball joint sizes
- QI Series: exposed spring loaded sleeve, larger sized applications
- PI Series: ball stud is retained by a spring clip, for lower load and fewer disconnection requirements, most economical alternative

QI/QD/PI Series "quick disconnect" ball joints are especially effective in applications requiring numerous and/or fast assembly/disassembly of the ball joint. Ball stud, sleeve and body components are produced from low carbon steel and are zinc plated and clear dichromate treated for extended corrosion resistance. The ball stud is heat treated on all models for extended wear resistance. Right and left-handed thread versions available.

Applications:

Light to medium-duty linkage applications, including:

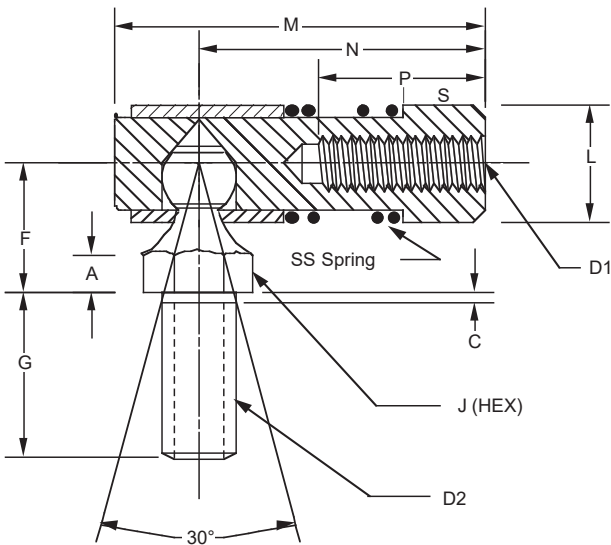
- Cable assemblies
- Light industrial applications
- Agricultural, lawn and garden equipment
- Racing (throttle links)

Features:

- Three different configurations, all with steel ball stud, sleeve and body to match your load and cost requirements
- Quick pull back, "no tools required" disconnect assembly provides easier access, faster maintenance
- Can be used in a wide range of temperatures: -60°F — 250°F (-51°C — 121°C)
- Right and left-handed versions available
- Custom sizes and assemblies can be built to your specifications
- QD/QI Series meets SAE J490 specification

Quick Disconnect Ball Joints with Spring - QI series

球头接头 QI系列



QI: carbon steel, zinc plated, yellow, inch
 SQI: stainless steel
 QM: carbon steel, zinc plated, yellow, metric
 SQM: stainless steel

型号	尺寸 inch												最小轴向力	最小径向力
Part No.	Dimension												Min Pull Test(lb)	Min Shear (lb)
	D1	D2	A	C	F	G	J	L	M	N	P	S		
QI 187	10-32-2B	10-32-2A	0.125	0.063	0.4375	0.4375	0.3125	0.4375	1.094	0.9063	0.4375	0.25	430	500
QI 250	1/4-28-2B	1/4-28-2A	0.125	0.063	0.469	0.562	0.375	0.562	1.25	0.969	0.61	0.35	560	500
QI 312	5/16-24-2B	5/16-24-2A	0.156	0.094	0.531	0.687	0.437	0.625	1.453	1.125	0.63	0.438	1000	1500
QI 375	3/8-24-2B	3/8-24-2A	0.187	0.094	0.687	0.875	0.5	0.75	1.75	1.375	0.812	0.47	1580	2400
QI 500	1/2-20-2B	1/2-20-2A	0.25	0.094	0.875	1.125	0.625	1	2.53	2.03	1	0.57	2400	2700

型号	尺寸 metric												最小轴向力	最小径向力
Part No.	Dimension												Min Pull Test(lb)	Min Shear (lb)
	D1	D2	A	C	F	G	J	L	M	N	P	S		
QM5	M5 x 0.8	M5 x 0.8	0.125	0.063	0.4375	0.4375	0.3125	0.4375	1.094	0.9063	0.4375	0.25	430	500
QM6	M6 x 1.0	M6 x 1.0	0.125	0.063	0.469	0.562	0.375	0.562	1.25	0.969	0.61	0.35	560	500
QM8	M8 x 1.25	M8 x 1.25	0.156	0.094	0.531	0.687	0.437	0.625	1.453	1.125	0.63	0.438	1000	1500
QM10	M10 x 1.50	M10 x 1.50	0.187	0.094	0.687	0.875	0.5	0.75	1.75	1.375	0.812	0.47	1580	2400
QM12	M12 x 1.75	M12 x 1.75	0.25	0.094	0.875	1.125	0.625	1	2.53	2.03	1	0.57	2400	2700

一、材料

座体：碳钢1045
 球杆：碳钢1045
 外套：碳钢1020
 弹簧：不锈钢
 可选择不锈钢

1. Material

Housing: Carbon Steel 1045
 Ball stud: Carbon Steel 1045
 Shell: Carbon:1020 carbon Steel
 Spring: Stainless Steel
 Alternative: Stainless Steel

二、表面处理

电镀蓝白锌或普通彩锌

2. Surface protection

Electroplated galvanized, passivated in white-blue or yellow

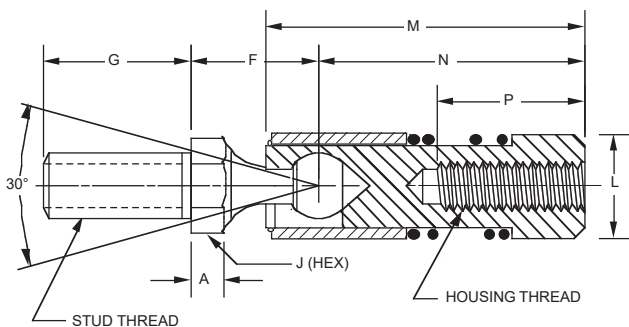
三、加润滑油脂，摆动灵活

3. Filled with lubricant and circle swing agilely without any block

四、所有尺寸为英制

4. Unless otherwise specified, all dimensions are in inches

QIL & SQIL (QUICK DISCONNECT, INLINE)



Carbon Steel Plated Zinc Yellow	Stainless Steel	Threads UNF	A	F	G	J	L	M	N	P
QIL187	SQIL187	10-32	0.125	0.438	0.438	0.313	0.438	1.094	0.906	0.438
QIL250	SQIL250	1/4-28	0.125	0.469	0.562	0.375	0.562	1.250	0.969	0.531
QIL312	SQIL312	5/16-24	0.156	0.531	0.687	0.437	0.625	1.453	1.125	0.594
QIL375	SQIL375	3/8-24	0.187	0.687	0.875	0.500	0.750	1.750	1.375	0.812
QIL500	SQIL500	1/2-20	0.250	0.875	1.125	0.625	1.000	2.530	2.030	1.000

一、材料

- 座体：碳钢1045
- 球杆：碳钢1045
- 外套：碳钢1020
- 弹簧：不锈钢
- 可选择不锈钢

二、表面处理

电镀蓝白锌或普通彩锌

三、加润滑油脂，摆动灵活

四、所有尺寸为英制

1. Material

- Housing: Carbon Steel 1045, 303 stainless steel
- Ball stud: Carbon Steel 1045, 303 stainless steel
- Shell: Carbon Steel 1045, 303 stainless steel
- Steel Spring: Stainless Steel
- Alternative: Stainless Steel

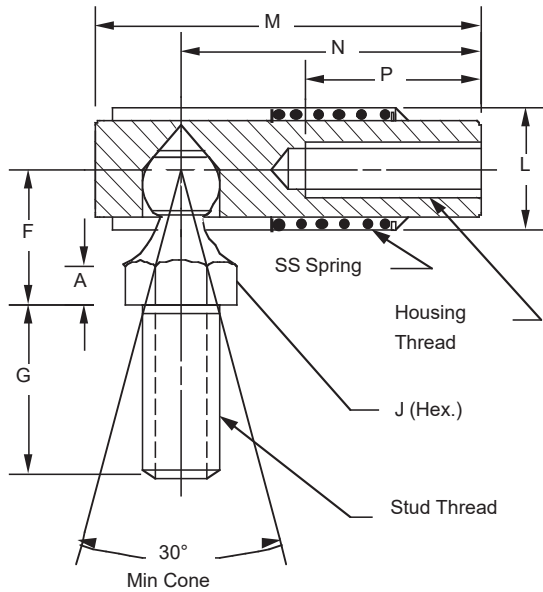
2. Surface protection

Electroplated galvanized, passivated in white-blue or yellow

3. Filled with lubricant and circle swing agilely without any block

4. Unless otherwise specified, all dimensions are in inches

QD (QUICK DISCONNECT, INTERNAL SPRING)



QD: carbon steel, zinc plated, yellow
SQD: stainless steel

型号	尺寸 inch										最小轴向力	最小径向力
Part No.	Dimension										Min Pull Test(lb)	Min Shear (lb)
	housing thread	stud thread	A	F	G	J	L	M	N	P		
QD 187	10-32-2B	10-32-2A	0.125	0.4375	0.4375	0.3125	0.4375	1.094	0.9063	0.4375	430	500
QD 250	1/4-28-2B	1/4-28-2A	0.125	0.469	0.562	0.375	0.562	1.25	0.969	0.61	560	500
QD 312	5/16-24-2B	5/16-24-2A	0.156	0.531	0.687	0.437	0.625	1.453	1.125	0.63	1000	1500
QD 375	3/8-24-2B	3/8-24-2A	0.187	0.687	0.875	0.5	0.75	1.75	1.375	0.812	1580	2400
QD 500	1/2-20-2B	1/2-20-2A	0.25	0.875	1.125	0.625	1	2.53	2.03	1	2400	2700

一、材料

- 座体：碳钢1045
- 球杆：碳钢1045
- 外套：碳钢1020
- 弹簧：不锈钢
- 可选择不锈钢

1. Material

- Housing: Carbon Steel 1045
- Ball stud: Carbon Steel 1045
- Shell: Carbon:1020 carbon Steel
- Spring: Stainless Steel
- Alternative: Stainless Steel

二、表面处理

电镀蓝白锌或普通彩锌

2. Surface protection

Electroplated galvanized, passivated in white-blue or yellow

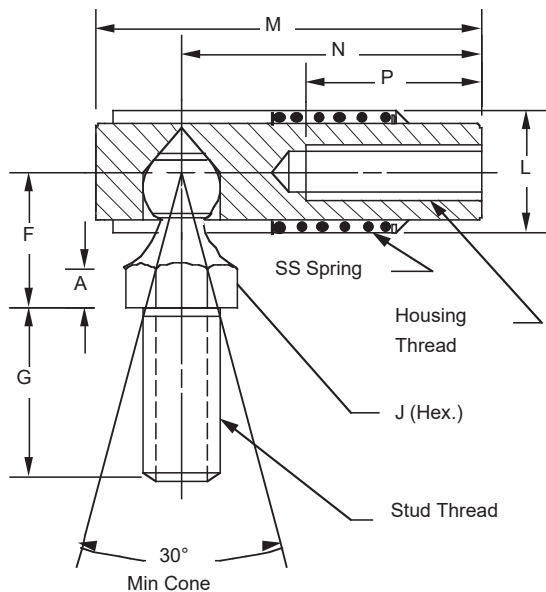
三、加润滑油脂，摆动灵活

3. Filled with lubricant and circle swing agilely without any block

四、所有尺寸为英制

4. Unless otherwise specified, all dimensions are in inches

QD1 (QUICK DISCONNECT, INTERNAL SPRING)



QD1: carbon steel, zinc plated, yellow
SQD1: stainless steel

型号 Part No.	尺寸 inch Dimension										最小轴向力 Min Pull Test(lb)	最小径向力 Min Shear (lb)
	housing thread	stud thread	A	F	G	J	L	M	N	P		
QD1 187	10-32-2B	10-32-2A	0.125	0.4375	0.4375	0.3125	0.4375	1.094	0.9063	0.4375	430	500
QD1 250	1/4-28-2B	1/4-28-2A	0.125	0.469	0.562	0.375	0.562	1.25	0.969	0.61	560	500
QD1 312	5/16-24-2B	5/16-24-2A	0.156	0.531	0.687	0.437	0.625	1.453	1.125	0.63	1000	1500
QD1 375	3/8-24-2B	3/8-24-2A	0.187	0.687	0.875	0.5	0.75	1.75	1.375	0.812	1580	2400
QD1 500	1/2-20-2B	1/2-20-2A	0.25	0.875	1.125	0.625	1	2.53	2.03	1	2400	2700

一、材料

- 座体：碳钢1045
- 球杆：碳钢1045
- 外套：碳钢1020
- 弹簧：不锈钢
- 可选择不锈钢

1. Material

- Housing: Carbon Steel 1045
- Ball stud: Carbon Steel 1045
- Shell: Carbon:1020 carbon Steel
- Spring: Stainless Steel
- Alternative: Stainless Steel

二、表面处理

- 电镀蓝白锌或普通彩锌

2. Surface protection

- Electroplated galvanized, passivated in white-blue or yellow

三、加润滑油脂，摆动灵活

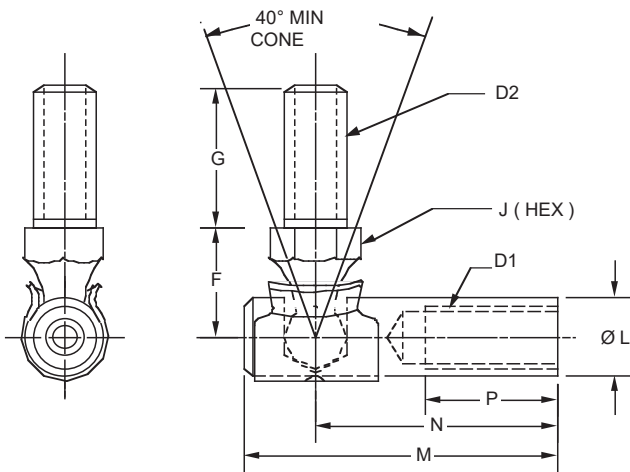
3. Filled with lubricant and circle swing agilely without any block

四、所有尺寸为英制

4. Unless otherwise specified, all dimensions are in inches

Quick Disconnect Ball Joints with Spring Clip- PI series

球头接头 PI系列



型号	尺寸 inch										
Part No.	Dimension										
	D1	D2	A	C	F	G	J	L	M	N	P
PI-3-3	10-32-2B	10-32-2A	0.125	0.063	0.438	0.438	0.3125	0.3125	1.156	0.875	0.484
PI-3-4	10-32-2B	1/4-28-2A	0.125	0.063	0.438	0.563	0.3125	0.3125	1.156	0.875	0.484
PI-4-3	1/4-28-2B	10-32-2A	0.156	0.094	0.438	0.438	0.3125	0.3125	1.25	0.969	0.531
PI-4-4	1/4-28-2B	1/4-28-2A	0.187	0.094	0.438	0.563	0.3125	0.3125	1.25	0.969	0.531
PI-4L-4L	1/4-28-2B	1/4-28-2A	0.25	0.094	0.562	0.5	0.3125	0.34	1.75	1.5	1.12

一、材料

座体：碳钢1020

球杆：碳钢1020

弹簧卡：弹簧钢

可选择不锈钢

1.Material

Housing: Low Carbon Steel 1020

Ball stud: Low Carbon Steel 1020

Retaining clip: Spring Steel

Alternative: Stainless Steel

二、表面处理

电镀蓝白锌或普通彩锌

2.Surface protection

Electroplated galvanized, passivated in white-blue or yellow

三、加润滑油脂，摆动灵活

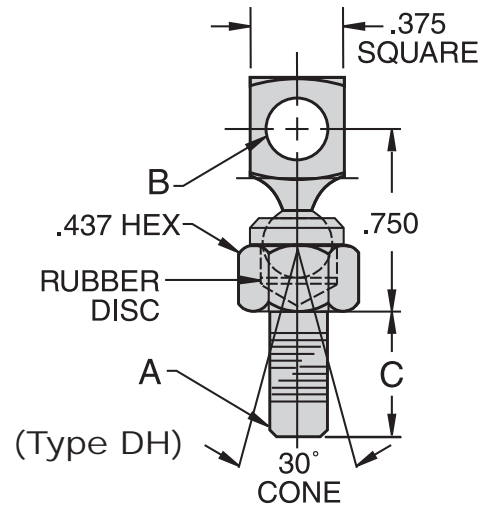
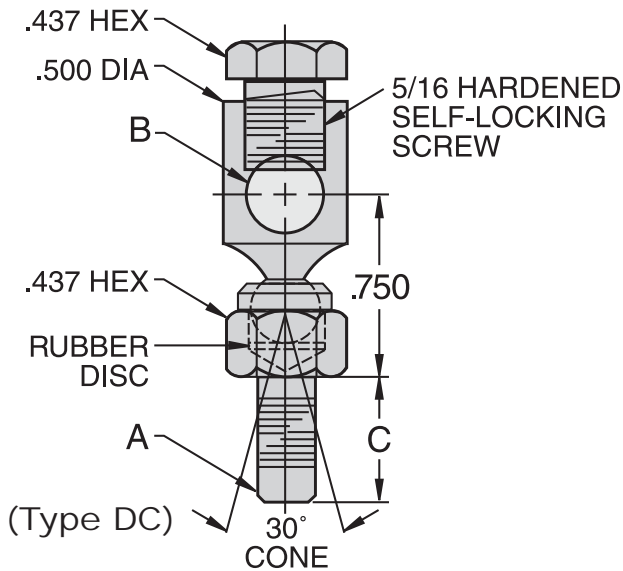
3.Filled with lubricant and circle swing agilely without any block

四、所有尺寸为英制

4.Unless otherwise specified, all dimensions are in inches

DC and DH Damper Control Swivels

球头接头 DC/DH系列



Part Number		B +0.005 -0.002	C ± .015	A	Weight Less Integral Nut & Washer (Pounds)	Weight With Integral Nut & Washer (Pounds)
Less Integral Nut & Washer	With Integral Nut & Washer	Bore Diameter	Shank	Thread Size & Length		
DC1005F	DC1005FN	.328	.312	10-32 x .250	.047	.050
DC1207F	DC1207FN	.328	.437	1/4-28 x .328	.050	.057
DC1209F	DC1209FN	.328	.562	1/4-28 x .500	.052	.058
DC1207C	DC1207CN	.328	.437	1/4-20 x .328	.049	.056
DC1209C	DC1209CN	.328	.562	1/4-20 x .453	.051	.057
DC1310F	DC1310FN	.328	.625	5/16-24 x .516	.056	.067
DC1312F	DC1312FN	.328	.750	5/16-24 x .641	.059	.070
DH1209F-2		.257	.562	1/4-28 x .500	.035	
DH1207F-2		.257	.437	1/4-28 x .328	.033	

Notes: 1. Swivels can be used with either 1/4" or 5/16" diameter control rods
 2. DH Swivel Joint is available with an integral nut and lock washer to ease assembly. Specify by adding "N" to suffix. Example: DC1005FN

1. 材料

座体: 碳钢1020
 球杆: 碳钢1020
 橡胶垫片: 丁腈橡胶

Material

Ball Joint-head & Base: Low Carbon Steel 1020,Zinc plated
Rubber Disc: Buna N Rubber
Self Locking Screw:Low Carbon Steel,Heat Treated,Zinc plated

Applications:

Numerous low load
 mechanical motion
 transfer applications
 where infinite adjustment
 is desired, including:
 HVAC
 Linear controls
 Light industrial
 applications

2. 表面处理

电镀蓝白锌或普通彩锌

Surface protection

Electroplated galvanized, passivated in white-blue or yellow
Filled with lubricant and circle swing agilely without any block

3. 滑油脂, 摆动灵活

Unless otherwise specified, all dimensions are in inches

4. 尺寸为英制

Zinc Alloy Ball Joint SQZ

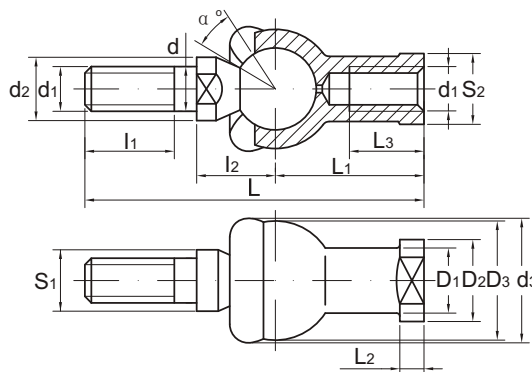
锌合金球头杆端关节轴承 SQZ 系列



Straight joint

- Ball joint housing with right or left-hand thread.
- Ball joint housing made of zinc base alloy.
- With rubber dust seal.

- 球头座带有左旋或右旋的螺纹。
- 球头座由锌基合金制成。
- 带橡胶密封圈。



Part No. 型号	Dimensions(mm) 尺寸(mm)															Load ratings 额定载荷KN	Weight 重量KG	
	d	d ₁	d ₂	d ₃	l ₁	l ₂	S ₁	L	L ₁	L ₂	L ₃	D ₁	D ₂	D ₃	S ₂			α ≈
SQZ 5 RS	5	M5×0.8	9	20	8	11	7	46	24	4	12	9	11	17	9	15	2.8	0.025
SQZ 6 RS	6	M6×1.0	10	20	11	12.2	8	55.2	28	5	15	10	13	20	11	15	3.7	0.041
SQZ 8 RS	8	M8×1.25	12	24	12	16	10	65	32	5	16	12.5	16	24	14	15	5.8	0.075
SQZ 10 RS	10	M10×1.5	14	30	21	19.5	11	80.5	35	6.5	18	15	19	28	17	15	8.4	0.12
SQZ 10 RS-1	10	M10×1.25	14	30	15	19.5	11	74.5	35	6.5	18	15	19	28	17	15	8.4	0.12
SQZ 12 RS	12	M12×1.75	17	32	24	21	15	91	40	6.5	20	17.5	22	32	19	15	11	0.18
SQZ 12 RS-1	12	M12×1.25	17	32	17	21	15	84	40	6.5	20	17.5	22	32	19	15	11	0.18
SQZ 14 RS	14	M14×2.0	19	38	28	23.5	17	109	45	8	25	20	25	36	22	11	15	0.27
SQZ 14 RS-1	14	M14×1.5	19	38	22	23.5	17	103	45	8	25	20	25	36	22	11	15	0.27
SQZ 16 RS	16	M16×2.0	22	44	29	25.5	19	118	50	8	27	22	27	40	22	11	15	0.36
SQZ 16 RS-1	16	M16×1.5	22	44	23	25.5	19	112	50	8	27	22	27	40	22	11	15	0.36
SQZ 18 RS	18	M18×1.5	23	45	25	31	20	130.5	58	10	32	25	31	45	27	11	19	0.54
SQZ 20 RS	20	M20×1.5	27	50	25	29	24	133	63	10	38	27.5	34	45	30	7.5	19	0.57
SQZ 22 RS	22	M22×1.5	27	52	26	33	24	145	70	12	43	30	37	50	32	7.5	23	0.76

-For left-hand thread of the ball joint housing, please add suffix "L", e.g. SQZL 5 RS.

-The type number of ball joints without seal is SQZ...

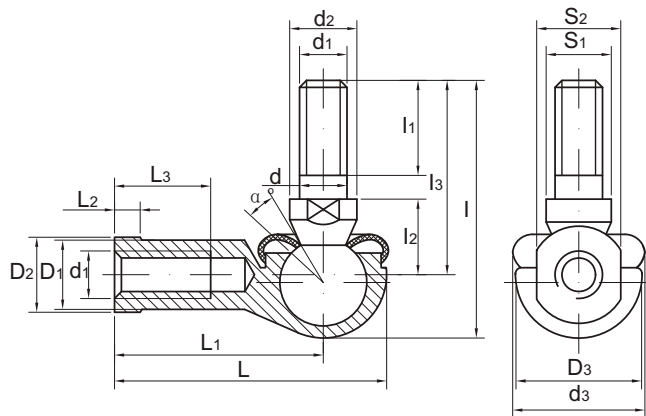
-球头座杆螺纹若是左旋，轴承型号须加“L”，例如：SQZL 5 RS.

-不带密封罩产品型号为SQZ..。

Angle joint

- Ball joint housing with right or left-hand thread.
- Ball joint housing made of zinc base alloy.
- With rubber dust seal.

- 球头座带有左旋或右旋的螺纹。
- 球头座由锌基合金制成。
- 带橡胶密封圈。



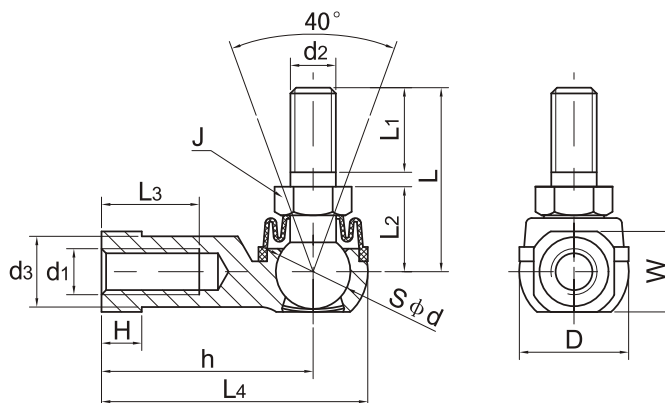
Part No. 型号	Dimensions 尺寸mm																		Load ratings 额定载荷KN	Weight 重量KG
	d	d ₁	d ₂	d ₃	l	l _{1 min}	l ₂	l ₃	S ₁	L	L ₁	L ₂	L _{3 min}	D ₁	D ₂	D ₃	S ₂	α ≈		
SQ 5 RS	5	M5×0.8	9	19	29	8	10	21	7	35	27	4	14	9	11	16	9	25	2.2	0.026
SQ 6 RS	6	M6×1.0	10	20	35.5	11	11	26	8	40	30	5	14	10	13	19	11	25	3.5	0.039
SQ 8 RS	8	M8×1.25	12	24	42.5	12	14	31	10	48	36	5	17	12.5	16	23	14	25	6.6	0.068
SQ 10 RS	10	M10×1.5	14	30	56.5	21	17	43	11	57	43	6.5	21	15	19	27	17	25	10	0.112
SQ 10 RS -1	10	M10×1.25	14	30	50.5	15	17	37	11	57	43	6.5	21	15	19	27	17	25	10	0.112
SQ 12 RS	12	M12×1.75	17	32	64.5	24	19	49	15	66	50	6.5	25	17.5	22	31	19	25	16	0.164
SQ 12 RS-1	12	M12×1.25	17	32	57.5	17	19	42	15	66	50	6.5	25	17.5	22	31	19	25	16	0.164
SQ 14 RS	14	M14×2.0	19	38	79.5	28	21.5	62	17	75	57	8	26	20	25	35	22	25	19	0.254
SQ 14 RS-1	14	M14×1.5	19	38	73.5	22	21.5	56	17	75	57	8	26	20	25	35	22	25	19	0.254
SQ 16 RS	16	M16×2.0	22	44	85.5	29	23.5	66	19	84	64	8	32	22	27	39	22	20	26	0.336
SQ 16 RS-1	16	M16×1.5	22	44	79.5	23	23.5	60	19	84	64	8	32	22	27	39	22	20	26	0.336
SQ 18 RS	18	M18×1.5	23	45	90	25	26.5	68	20	93	71	10	34	25	31	44	27	20	33	0.464
SQ 20 RS	20	M20×1.5	27	50	90	25	27	68	24	99	77	10	35	27.5	34	44	30	20	45	0.538
SQ 22 RS	22	M22×1.5	27	52	95	26	28	70	24	109	84	12	41	30	37	50	32	16	48	0.713

- For left-hand thread of the ball joint housing, please add suffix "L", e.g. SQL 5 RS.
- The type number of ball joints without seal is SQ...
- 球头座杆螺纹若是左旋, 轴承型号须加 "L", 例如: SQL 5 RS。
- 不带密封罩产品型号为SQ..。

Angle joint

- Ball joint housing with right or left-hand thread.
- Ball joint housing made of zinc base alloy.
- With rubber dust seal.

- 球头座带有左旋或右旋的螺纹。
- 球头座由锌基合金制成。
- 带橡胶密封圈。



Part No. 型号	Dimensions 尺寸m														Load ratings	Weight
	d1	d2	d3	L1 min	L	L2	L3 min	L4	h	H	W	D	J	S		
BL 6 D	M6×1.0	M6×1.0	10	11	11	26	16	38	30	5	11	16	10	11.11	9.9	0.037
BL 8 D	M8×1.25	M8×1.25	13	12	14	31	19	45.5	36	6	14	19	12	12.7	12.5	0.066
BL10BD	M10×1.5	M10×1.5	14.5	21	17	43	23	55.5	43	7	17	23	14	15.88	18.3	0.11
BL10D	M10×1.25	M10×1.25	14.5	15	17	37	23	55.5	43	7	17	23	14	15.88	18.3	0.11
BL12BD	M12×1.75	M12×1.75	17.5	24	19	49	26	64.5	50	8	19	26	17	19.05	26.7	0.16
BL12D	M12×1.25	M12×1.25	17.5	17	19	42	26	64.5	50	8	19	26	17	19.05	26.7	0.16
BL16BD	M16×2	M16×2	22	29	23.5	66	34	83	64	11	24	34	22	22.23	36.4	0.33
BL16D	M16×1.5	M16×1.5	22	23	23.5	60	34	83	64	11	24	34	22	22.23	36.4	0.33

-For left-hand thread of the ball joint housing, please add suffix "L", e.g. BL 8DL

-球头座杆螺纹若是左旋，轴承型号须加“L”，例如：BL8DL