

MYOSTAT MOTION CONTROL INC

# Spherical Rolling Joints

Precision and rigidity  
for prismatic joints &  
parallel manipulators



Manufactured by Hephaist Seiko in Japan under ISO 9001: 2008 certification, the Spherical Rolling Joint provides a highly precise and rigid ball joint for demanding parallel robotics and photonics applications. The centre globe is assembled under preload conditions to achieve backlash as low as 1 micron while providing motion with extremely low frictional resistance. The SR Joint reduces the number of joints by  $\frac{1}{2}$  to  $\frac{2}{3}$ , reducing the number of failure points and the accumulation of flexibility.

**A COMPACT 2 OR 3 DEGREE OF FREEDOM SOLUTION  
WITH AN ON-AXIS MOUNTING CONFIGURATION**

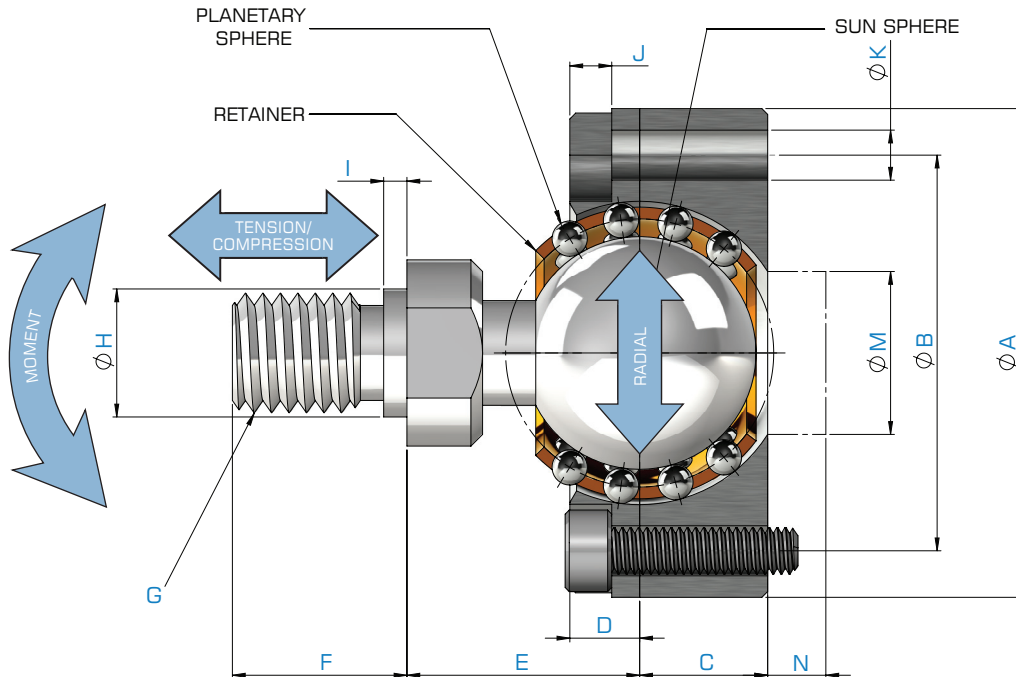
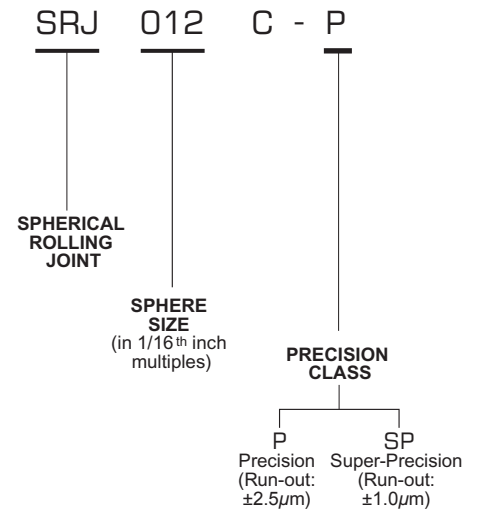
## TECHNICAL SPECIFICATIONS

MODEL	BASIC LOAD RATINGS		RECOMMENDED PERMISSIVE LOADS				WEIGHT (kg)	MAXIMUM SWING ANGLE
	C (N)	Co (N)	Compressive (N)	Tensile (N)	Radial (N)	Moment (N-m)		
SRJ004C	128	100	102	38.4	64	0.64	0.015	±15°
SRJ006C	320	280	256	96	160	1.84	0.036	±30°
SRJ008C	490	540	392	147	245	3.92	0.06	±30°
SRJ012C	720	770	576	216	360	7.20	0.18	±30°
SRJ016C	1170	1300	936	351	585	18.7	0.37	±30°
SRJ024C	2840	3920	2272	852	1420	59.6	0.93	±30°
SRJ032C	5800	8820	4640	1740	2900	174	2.30	±30°
SRJ048C	10600	16000	8480	3180	5300	413	6.73	±30°

C(N) basic dynamic load rating Co(N) basic static load rating

- Standard product material is SUJ2 (high carbon, high chromium bearing steel)
- Precision classification "SP" available for sizes SRJ008-SRJ-032
- Customization options include stainless steel product material, Raydent coating, and modifications to accommodate high vacuum and clean room environments
- Additional customizations available upon request
- The SR Joint is a patented product manufactured using Hephaist Seiko's unique spherical surface processing technology.

## PART NUMBER BREAKDOWN



## USAGE GUIDELINES

Designed for axial loading; do not apply load in any other direction with the shaft inclined for extended periods

Do not exceed 80% of the load rating for extended periods

Avoid rotating the shaft

Retainer may become misaligned gradually during use. If misaligned, release the load and set the retainer such that it is concentric with the shaft when oriented normal to the base. Continuous use of the joint while the retainer is misaligned could damage the retainer.

Please reference the SRJ USAGE GUIDELINES document for additional information available for free download at [srjoint.com](http://srjoint.com)

## DIMENSIONS

MODEL (units: mm)	A	B	C	D	E	F	G	H	I	J	K	M	N	WIDTH ACROSS FLATS
SRJ004C	19	15	3.8	2.5	10	6	M3x0.5	3.6	2	1.5	2	6	1.5	4
SRJ006C	25	20	5.5	3.8	11.5	8	M4x0.5	4.5	2	2.3	3	10	2	5
SRJ008C	30	24	7	4	16	12	M5x0.5	5.5	4	2	3.4	11	2	7
SRJ012C	42	34	11	6	20	15	M10x1.5	11	2	3.6	4.3	14	2	14
SRJ016C	56	45	12	7	32	18	M12x1.75	12.6	3	4.6	5.5	25	5	14
SRJ024C	74	62	17	11	42	23	M14x2	15	5	5.5	6.6	35	7	17
SRJ032C	100	84	22	16	60	30	M16x2	16.6	6	8.6	9	48	10	22
SRJ048C	136	114	38	22	78	38	M28x2	30	6	10.8	11	60	10	30

M and N indicate the required clearance for the retainer on the mounting surface

**MYOSTAT MOTION CONTROL INC**  
Automation Components and Modern Mechatronic Solutions

**HEPHAIST**