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JAPANESE INDUSTRIAL STANDARD

**Metallic ankle joints for lower
extremity orthoses**

JIS T 9214—1991

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Metallic ankle joints for lower
extremity orthoses

T 9214-1991

1. Scope

This Japanese Industrial Standard specifies metallic ankle joints for lower extremity orthoses (hereafter referred to as the "ankle joints").

Remarks 1. Applicable Standards to this Standard are as follows:

JIS B 0205 Metric Coarse Screw Threads

JIS B 0207 Metric Fine Screw Threads

JIS B 1501 Steel Balls for Ball Bearings

JIS B 2702 Hot Coiled Helical Springs

JIS B 2707 Cold Coiled Helical Compression Springs

JIS T 9215 Stirrups for Lower Extremity Orthoses

2. In this Standard the units and numerical values shown in { } are in accordance with the traditional units and appended for informative reference.

2. Definitions

For the purposes of this Standard following definitions apply.

Further, the name of each part is to be as shown in the Attached Figure.

- (1) joint part Parts of ankle joint excluding the upright bar and stirrup.
- (2) control spring The coiled spring for bottom bending or back bending control of ankle used for ankle joint (with attached single-direction spring control) or ankle joint (with attached two-direction spring control).
- (3) steel ball The steel ball for ball bearing used together with the control spring of ankle joint (with attached single-direction spring control) or ankle joint (with attached two-direction spring control).
- (4) integral type The ankle joint of integral structure of joint part and upright bar.
- (5) separating type The ankle joint of which joint part and upright bar can be separated.

3. Classification and symbols

The classification and symbols shall be as given in Table 1.

Table 1. Classification and symbols

Classification	Structure	Symbol	Remarks
Free motion ankle joint	Integral type	FI	Refer to Attached Fig. 1
	Separating type	FS	—
Ankle joint (with attached single- direction spring control)	Integral type	SI	Refer to Attached Fig. 2
	Separating type	SS	—
Ankle joint (with attached two- direction spring control)	Integral type	DI	—
	Separating type	DS	Refer to Attached Fig. 3

4. Performance

4.1 Static strength The ankle joint, when tested according to 9.2, shall be free from abnormalities such as rupture, permanent set, incomplete working, etc.

4.2 Endurance

4.2.1 Endurance in movable zone

- (1) The ankle joint, when tested according to 9.3, shall be free from abnormalities such as rupture, permanent set, incomplete working, etc.
- (2) For ankle joint, before the test and after completion of the test, the difference of play (jolting) measured according to 9.5 and 9.6 shall be not more than 1.0 mm.

4.2.2 Endurance of movable limit part

- (1) The ankle joint, when tested according to 9.4 shall be free from abnormalities such as rupture, deformation, incomplete working, etc.
- (2) The ankle joint, at the time of completion of the test of 9.4, the difference of movable zones measured according to 9.7 shall be not more than 1.5 mm.

4.3 Abnormal sound At the time of completion of tests of 9.3 and 9.4, when the ankle joint is bent and extended, abnormal sound shall not be generated.

5. Shape and dimensions

5.1 Width and thickness of upright bar The width (w) and thickness (t) of the upright bar shall be as shown in Fig. 1 and the oblique line parts of Table 2.

Further, the permissible dimensional deviations shall be ± 0.3 mm.