

EXTENSION SPRING PRODUCT INFORMATION

Stock sizes in music wire and stainless steel. ASRaymond extension springs have a wide application for experimental, development, prototype and maintenance work, and have been specified, designed and manufactured to high precision standards. All extension springs have uniform body diameter and are produced with full twist loops. They are wound with initial tension, therefore some force is required before the coils are initially separated.

Materials

Part numbers starting with 6 in the following pages:

Music Wire: ASTM A228 or AMS 5112

Stainless Steel: Type 302 per ASTM A313 or AMS 5688

spring temper (Chemical and Physical only)

Part numbers starting with T in the following pages:

Music Wire: DIN 17223 or JIS G4314 SWP -A/B or AMS 5112

Stainless Steel: Type 301, 302 or 304 per DIN 17224 or JIS

G4314 SUS 302/304 or AMS 5688 spring temper (chemical and physical only).

Music wire springs are not recommended for applications where the temperature exceeds 121 degrees C. (250 degrees F.). Stainless steel is not recommended above 260 degrees C. (500 degrees F.).

Stainless steel is slightly magnetic due to cold working during manufacturing. Stainless steel springs may have a slight residue of nickel on the surface of the wire. This is normal and will not affect the function of the part.

Wire diameter is prior to forming.

Coil Direction (helix)

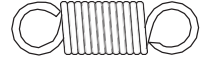
Right or left according to machine set -up at time of run. Coil count is for reference only.

Free Length

Free length is reference only.

Ends

Full twist loop.



End Position

Part numbers starting with 6 in the following pages :

The majority of the parts are in-line within +/- 22 degrees.

All springs have full twist loops, but physical shape may appear different.

Loads & Spring Rate

Initial tension T is for reference only and will vary.

Load and rate values are shown for both music wire and stainless steel in their respective columns.

Load P at L1 and spring rate (R) are nominal and for reference only. Maximum load P is attained at extended length L1.

Load values at lengths other than L1 can be approximated by multiplying the proposed deflection by the rate (R) and adding the initial tension T. $P = (Lx - L) \times R + T$ where Lx is the new extended length. Load at Lx should be reference only.

Surface

Music Wire: oil

Stainless steel: Only part numbers starting with 6 in the following pages are passivated. All others are plain wire.

Packaging

Parts are bulk -packed. Due to physical characteristics, tangling can occur during transit on wire sizes under .035" (.89mm). Please inquire about special packaging when ordering.

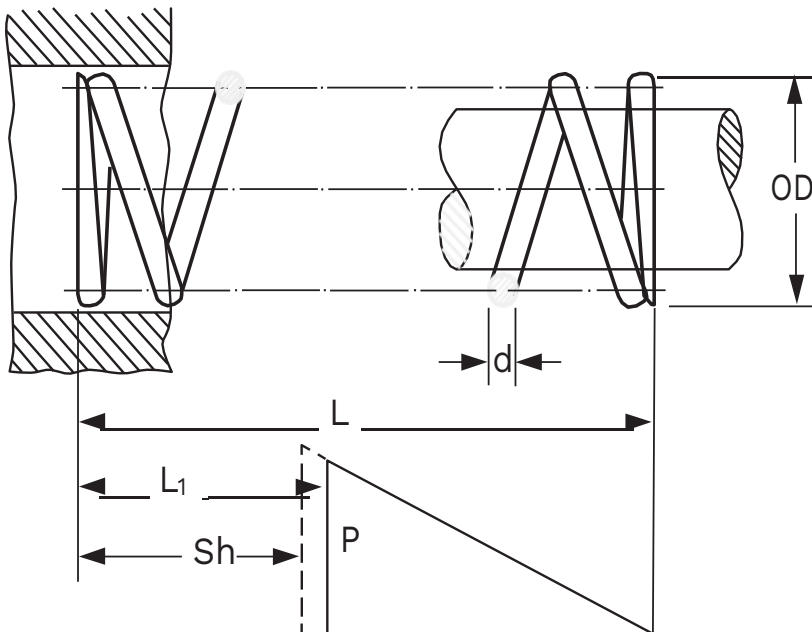


Illustration Key

OD = Outside diameter

d = Wire diameter

Sh= Approx.Solid Height

L = Free length (reference use only)

L1 = Loaded length (minimum working length)

P = Load at L1