

# SERVOBELT ROTARY

## (SBR-16 / SBR-50 and SBR-25 / SBR-100)

# BELT TENSIONING PROCEDURE

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### Revisions

Revision	ECO	Description/ECO
-		INITIAL RELEASE
A	2030	MODIFIED PROCEDURE TO ENSURE MINIMUM TENSION, INCREASED INITIAL PUSH FORCE, ADDED DIFFERENT FORCE FOR SBR-50
B	DCR 045	ADDED REFERENCE TO SBR-16 & SBR-25 MODELS; MINOR CHANGES TO WORDING FOR CLARITY
C	DCR 193	REMOVED DEPICTION OF FACTORY BELT TENSIONING PROCEDURE – ONLY FIELD PROCEDURE IS NOW SHOWN.
D	ECO 805	RE-TITLED PROCEDURE TO SPECIFY SBR MODELS

## 1 INTRODUCTION

The purpose of this document is to describe the proper field tensioning of the ServoBelt Rotary belt for the SBR-16/SBR-50 and the SBR-25/SBR-100. This field procedure will be adequate for most applications.

## 2 BELT TENSIONING PROCEDURE



### ServoBelt Rotary with motor down (cut-away and normal views, motor down version).

1. Ensure the two M6 set screws used to lock the belt tensioning shuttle are loosened so that the shuttle can move freely (the set screws should have fresh Solithane or Loctite 243 applied before Step 4 when the shuttle is locked back in place with the appropriate target load to obtain proper belt tension).
2. Push the shuttle in and rotate the stage a few times to make sure the belt has fallen into proper engagement with the stage gear and the motor pinion. The shuttle will move in and out slightly as the belt rotates. Locate a position of the stage where the shuttle is moved in (this can be done by feel or preferably with a low deflection force gage that is fixed relative to the rotary stage). Proceed to the next step keeping the stage in this position.
3. With a force gage push directly (centered on face of shuttle and normal to it) inward on the shuttle to the target load of **22-23 lbs for the SBR-25 or SBR-100** and **18-19 lbs for the SBR-16 or SBR-50**. This creates a belt tension of 18 lbs.
4. Lock the shuttle in place by tightening the two set screws to 40 in-lb minimum while maintaining the push force on the shuttle. The set screws should be tightened incrementally: tighten one to finger tight, then the other, then back to the first one to a slightly higher torque, and so on.