

Technical News Bulletin

04 May 2004

Take-out Tong Arms, Wide Belt

Production factors such as high-speed operation and light-weighting demand precise and repeatable take-out tong position for container pick-up. To meet these demands Emhart Glass can now offer a new range of takeout tong arms for Constant Cushion and Servo Takeout Mechanisms featuring a wider and more durable tooth belt.

Description

The self-containing housing of the belt driven takeout arm is a hard-anodized light alloy casting with integrated passages for tong close operating air. A removable cover permits easy access to all functional parts. Pulley and shafts are support by low rigid friction bearings with the largest possible distance between the support points.



Figure 1 - Takeout Tong Arm, Wide Belt version (shown without cover)

The tooth belt has an aramide fiber core, which is temperature stable and renders maximum bending fatigue and impact strength. Core material and the special woven and soaked belt surface texture are highly oil-, chemical and wear resistant. Unlike the previous belt driven take-out arms the new arms have a toothed belt tensioning pulley which acts from the inside of the belt, thus eliminating the backward bending of the belt (Refer to Fig. 1). Belt tension adjustment, should it be required, can be made without disassembly of the cover. The proper belt tension must be checked using the gage, Part No. 94-661-3. A stop block integrated in the housing prevents free rotation of the tong head in case of belt failure (Refer to Figs. 2 and 3). The bearings are lubricated by high temperature grease. Air passages between shafts and housing are sealed with low friction seals.

The wide belt take-out arms are fully compatible with previous belt and gear driven arms, requiring no modification to the take-out mechanisms.

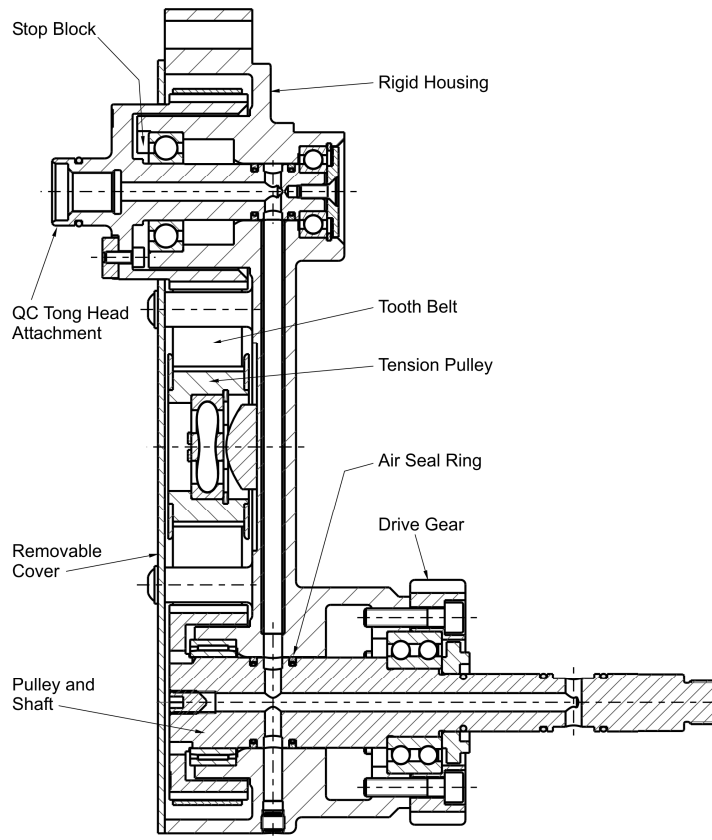


Figure 2 - 5 1/2" DG Takeout Arm (210-431-1)

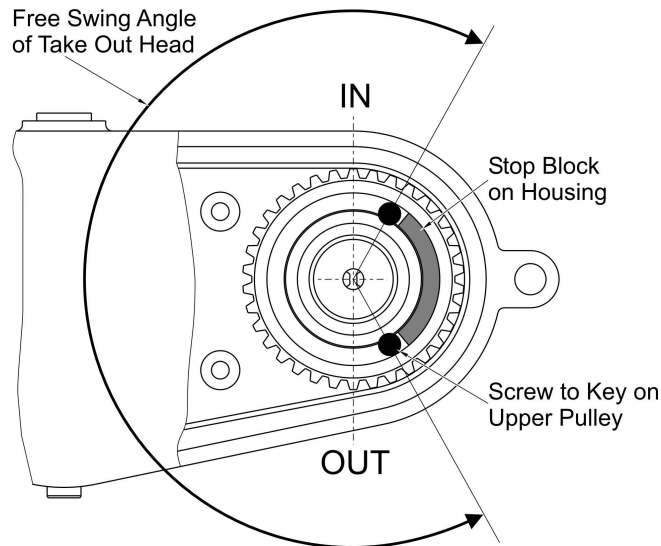


Figure 3 - Safety feature of the new Wide Belt Takeout Arm

Specification

The new series of wide belt takeout arms will be available by May 2004 for all Type IS, AIS and NIS machines. The arms are designed for QC tong heads only.

New Part No.	Superseded Part No.	Machine Type	Used with Take-out Mechanism
200-2029-1	200-479-1	IS 4 1/4"	Constant Cushion
200-2030-1	200-480-1	IS 5"	Constant Cushion
200-2031-1	-	IS 4 1/4"	Servo Series 200
200-2032-1	-	IS 5"	Servo Series 200
200-2035-1	200-484-1	IS 4 1/4"	Servo Type 400
200-2036-1	200-485-1	IS 5"	Servo Type 400
210-431-1	210-380-1	IS 5 1/2", IS 6 1/4" & AIS	Constant Cushion
210-439-1	-	IS 5 1/2", IS 6 1/4" & AIS	Servo Series 200
210-445-1	210-381-2	IS 5 1/2", IS 6 1/4" & AIS	Servo Type 400
400-5084-1	-	NIS	Servo Series 200
400-5091-1	400-5034-1	NIS	Servo Type 400

With the introduction of the wide belt takeout arms the previous belt driven takeout arms will no longer be manufactured and supplied as complete units. Spare and wear parts for the superseded products will be available until the end of 2008.

Characteristics

- Precise container pick-up
- Zero backlash operation
- Robust, long lasting tooth belt
- Easy belt tension adjustment
- Low friction bearing mounting of drive elements
- Precise mechanism motion
- Long service life
- Tong close air isolated from lubricants