

Technical News Bulletin

Steinhausen, August 2026



NIS Take Out Arm Reinforcement

- Temperature-compensated structure
- Extended lifetime
- Maintenance friendly design

Introduction

Enhancing Glass Forming Equipment to meet rising demands

The market requirements for glass forming equipment are increasing as the industry evolves. On one side, we are witnessing a surge in cavity rates increases and the use of robust and heavier Variable Center Distance (VCD) Take-Out Tong Heads. Both increase mechanical stress. On the other, the market is pushing for extended Mean Time Between Assistance (MTBA) and Mean Time Between Failures (MTBF) to minimize operational expenditure (OPEX). Our commitment lies in the relentless pursuit of continuous improvement and the intelligent advancement of our product line. This dedication is exemplified by the comprehensive redesign of the NIS Take Out Arm. The thorough redesign not only addresses but surpasses the heightened demands and expectations of our customers, it incorporates basically the following features:

- Temperature-Compensated Structure: Ensures optimal performance across varying thermal conditions, enhancing reliability and efficiency.
- Precision Tapered Roller Bearings: Utilized correctly to provide superior load handling and durability, reducing wear and tear.
- Maintenance-Friendly Design: Simplifies upkeep processes, thereby reducing downtime and associated costs achieved by Jacking screw.

By integrating these advanced features, we can deliver equipment that not only meets but exceeds industry standards. This is ensuring that our clients can operate with greater efficiency and reduced costs.

Example of a material pairing adjustment

Temperature requirements in glass plants are the dominant factor among many other difficult environmental influences. Effective and robust designs cannot simply be achieved by oversizing but are primarily achieved through the optimal selection of materials, tolerance ranges, and quality. The thermal expansion difference between aluminum housing and steel bearings is eliminated by the introduction of steel bushings. With optimal design, critical loads on the components were reduced and loosening of the press fits on bearing shells is avoided. **Chart 1** shows a practical example of the challenges that arise with large temperature changes. With the new design no gap will arise, the press fit remains intact.

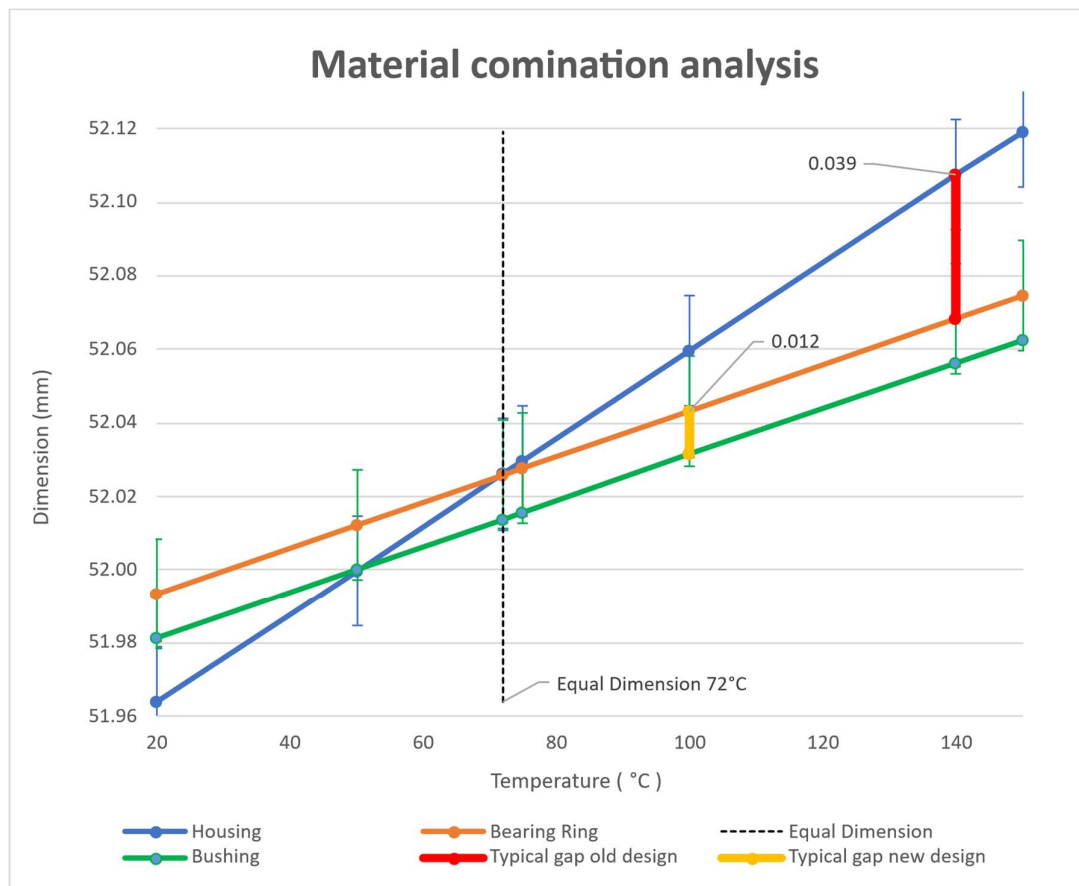


Chart 1 Potential of an optimized material layout

Installation Requirements

The new NIS Take Out Arm 400-5518-1 is the evolution of the existing 400-5084-2 and is compatible with the existing Gearbox and Take-Out Tong Head interfaces of the NIS.

Features

Reduction of notch effects

Tapered roller bearings

Steel bushings introduced

Only steel sealing surfaces

NILOS-rings introduced

Jacking screw introduced

Benefits

Optimized mechanical strength on both pulley and shafts

Increased durability for key and end stop

High performance and precision bearing systems

Avoidance of differential thermal expansion effects

Extended lifetime for shaft seals and wear reduction

Prevention against loss of lubrication and contamination

Improved assembling and disassembling on Gearbox
