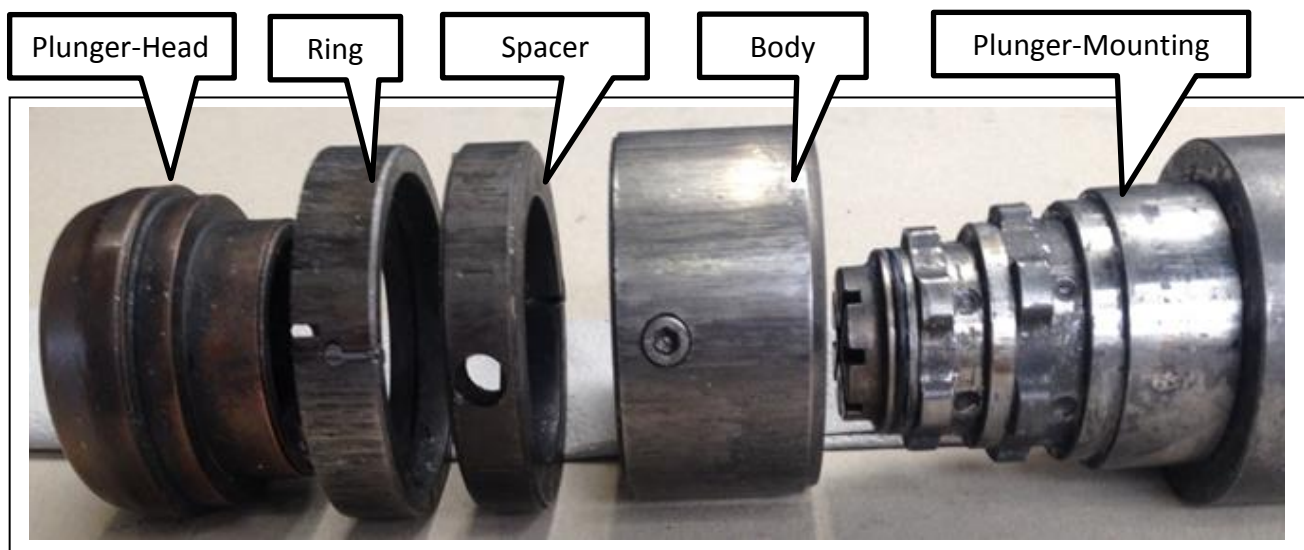


Plunger innovation increases productivity

New technology reduces cost and

improves die casting quality

GALAX-PLUNGER GP-R Ø 70 MM



Customer's initial situation:

Test duration:	April 2013 till June 2015
Plunger:	GP-R Ø 70 mm, GALAX PLUNGERS AG
Plunger lubrication:	Beads / granules / pellets Isolat® 80 G Tribo-Chemie GmbH
Casting chamber:	One-part casting chamber with oil thermoregulation

Result with Galax-Plunger GP-R Ø 70 mm after 500.000 shots:

Plunger-Head: After 200.000 shots the first plunger-head breaks due to a defect of the water cooling system. The second plunger-head was assessed after 300.000 shots and it was found as good and subsequently test will continue.

Ring: Up to 80.000 shots could be achieved with the ring (wearing part).

Spacer:
Body:
Plunger-Mounting: } All parts rated in good working condition after 500.000 shots.

Case Study



Conclusion:

Cost reduction for the customer can be achieved clearly by increasing the plunger- and ring-lifetime.

Productivity, as well as the quality can be increased as downtime / machine set-up time can be reduced.

The customer, testing the Galax-Plunger GP-R Ø 70 mm, also has changed the other plungers (Ø 60 and 80 mm) to Galax-Plungers, trusting to increase plunger-lifetime too. Results to follow.

Résumé:

For a more general conclusion additional tests with Galax-Plungers (Ø 60 to 200 mm) are in progress at various foundries. We are awaiting the confirmation of the initial positive results.

First results show clear improvements regarding plunger-life time and casting quality. For final results an additional long-term test will be carried out.

Furthermore another positive aspect was noted during the Galax-Plunger test as the quality of the castings improved considerably. Analysing this pleasing result it was concluded that the applied plunger bead lubricant, Isolat® 80 G, supplied by Tribo-Chemie GmbH, which is dosed in minimal quantities, is not only ensuring an excellent lubrication and protection of the plunger but also has a positive influence on the quality of the casting.

Therefore, Isolat® 80 G is a perfect supplement to the Galax-Plunger.