

Brooks On-Board[®] Upgrade for GSD Classic Ion Implanters

Turn-Key Upgrade Package:

- Brooks offers a performance-enhancing, fully-integrated On-Board Cryopump upgrade solution for all vacuum configurations of the GSD Classic Ion Implanter:
 - On-Board 8 and On-Board 10 Cryopumps replace the Cryo-Torr[®] 8 and Cryo-Torr[®] 10 Cryopumps on the P2 Beamline and P3 Resolver Housing chambers.
 - Systems with the P9 End-station cryopump are upgraded with the On-Board 250F or On-Board 10F cryopumps



Value Proposition:

This upgrade is for customers who are concerned with increasing tool availability and increasing wafer throughput. With this upgrade customers can reduce regeneration-caused downtime and increased wafer throughput with enhanced hydrogen pumping during ion implants.

All upgrade inquiries must be transacted through Brooks technical support 1-800-FOR-GUTS[®]

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Features:

- Automated regenerations designed for optimal photoresist removal
- Fast Regenerations restore hydrogen pumping speed and capacity to 100%
- GOLDLink[®] enabled
- Analysis of historical On-Board performance
- Installed by experienced Brooks Engineers
- Backed by 1-800-FOR-GUTS[®]:
7x24x365 Technical Support

Wafers per Year with Cryo-Torr[®]:

240 Cycles @ 8 Wafers/Cycle = 1,920 Wafers/Day

1,920 Wafers x 300 Days = 576,000 Wafers/Yr

Wafers per Year with On-Board:

262 Cycles @ 8 Wafers/Cycle = 2,096 Wafers/Day

2,096 Wafers x 300 Days = 628,800 Wafers/Yr

52,800 Additional Wafers per Year = 9.1% Increase

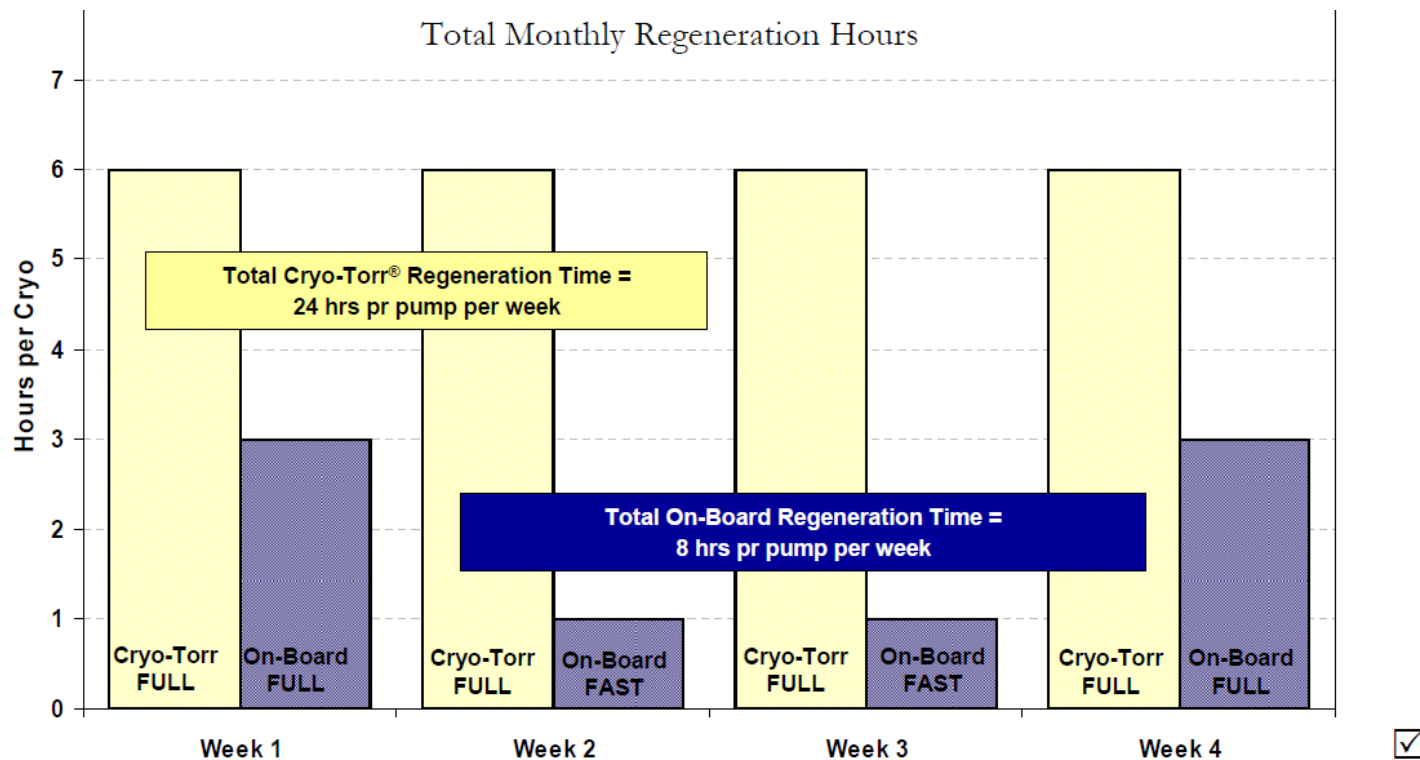
Benefits:

- **Lower Maintenance Costs**
 - Save \$3,000 to \$10,000 per cryopump over 24-month
- **Increase Tool Availability**
 - Reduce monthly regeneration times from 60 hrs to 18 hrs per pump
- **Increases Wafer Throughput**
- **Extension and optimization of pump change-out cycles from historical analysis.**
- **Faster and improved automated regenerations**
 - Full Regeneration = 3 hour
 - Fast Regeneration < 1 hour

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By utilizing On-Board's **FastRegen[®]** capability, availability-increasing benefits are immediately realized via reduced regeneration downtime. In addition, the new On-Board Ion Implant module will optimize Full Regenerations to remove internal build-up of process by-products, effectively extending each pump's operational life.



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