



Imperial College London

WARWICK



FETS RFQ Assembly

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First go at an assembly sequence...

The idea is:

- 1. Use special end flanges to align the vanes
- 2. Assemble once without the O ring in place
- 3. Align and fix positions of alignment blocks
- 4. Disassemble
- 5. Re-assemble with O ring in place to fixed alignment
- 6. (Can re-tweak if necessary?)

Q: Why not just have the O ring in place from the start?

A: The interfaces do not touch with the O ring in place i.e. The vane rests on the O ring until clamped tight. Then once clamped tight it is hard to move the vanes around due to shear forces on O ring.



Starting with one major vane...







Attach adjustment blocks...







Attach end alignment flanges...



Bolt on end flanges aligned to major vane





Attach a minor vane...



Lock side alignment blocks to correct position





Attach other minor vane...







And place top major vane...



Lock side alignment blocks to correct position





Strip down and add 3D 'O' ring







.... And rebuild

















.... And rebuild







.... Align each completed RFQ section to beam axis (optically)





