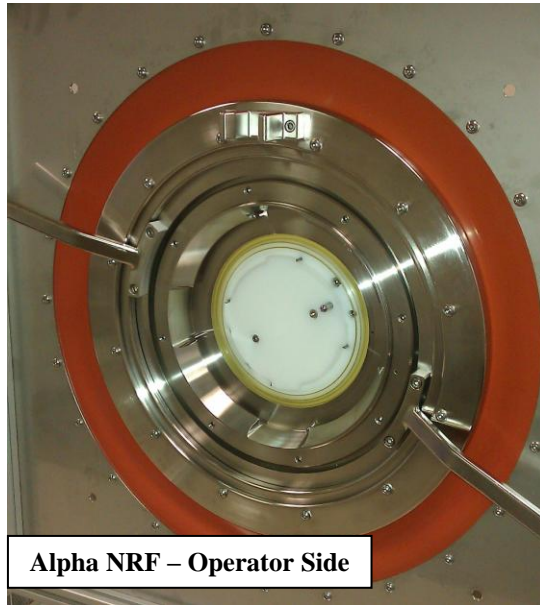


## Press Release – Alpha NRF System Development

Dynamic Design Pharma (DDP) is pleased to announce the development of the Alpha NRF Flange system. The system permits docking of a stationary beta port, for example one mounted on a tank or transfer isolator, to an alpha port which is configured to rotate during the docking process. The Alpha NRF incorporates a standard La Calhene DPTE alpha flange but it can also be adapted to mount any alpha port available on the market including for example CRL's products.



Alpha NRF – Operator Side



Alpha NRF – Sterile Side

### System Description

Alpha NRF consists of a La Calhene DPTE alpha port mounted on Dynamic Design Pharma's NR Flange that, by means of a proprietary dynamic seal and bearing system, permits rotation of the alpha flange relative to the outer mounting ring. The outer mounting ring attaches to the isolator bulkhead via a silicone diaphragm that, by virtue of its flexibility, facilitates the docking process between a fixed beta flange and the rotating alpha flange. Handles attached to the NR flange permit rotation of the alpha flange during the docking process.

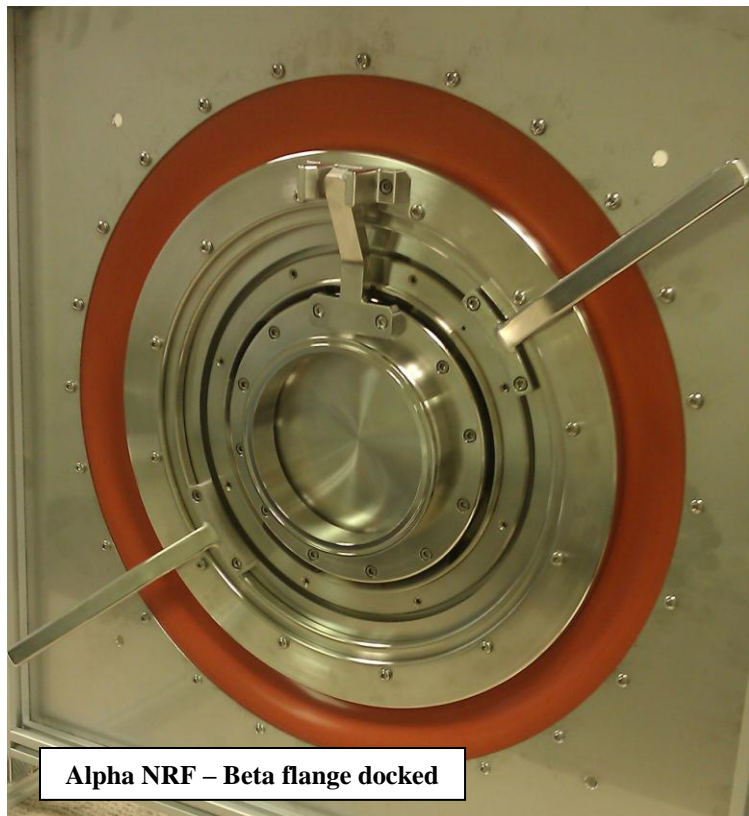
### Docking process

There is no difference between the docking process of the beta flange onto the Alpha NRF system as compared to that of commonly configured systems where the beta flange rotates and the alpha flange is stationary.

### System applications

There are two applications that are most typical for the Alpha NRF system. The first application is docking of a tank, typically featuring a fixed beta flange interface and containing sterile stoppers, to the isolator system. Such connection is greatly facilitated by the Alpha NRF system. A second application is the docking process between a transfer isolator featuring the beta flange and a second isolator featuring the Alpha NRF flange. In this second application, accurate alignment between the two systems is difficult to achieve. The Alpha NRF provides the necessary float to eliminate the need for accurate alignment between systems.

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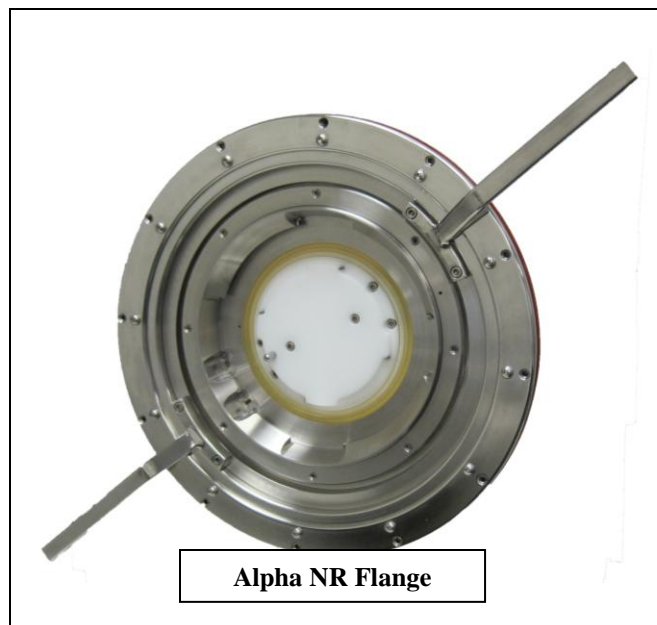
Alpha NRF – Beta flange docked



Beta adapter



Anti Rotation device



Alpha NR Flange

### Alpha NR vs. Alpha NRF Flange

The Alpha NR Flange is almost identical to the Alpha NRF Flange including La Calhene's DPTE alpha flange, DDP's proprietary NR flange and the functionality of the docking process. The difference between the two systems is that the Alpha NR is rigidly mounted to the isolator bulkhead. Implementation of the Alpha NR system is appropriate for those applications that include some free movement of the beta flange during the docking process or for those applications where precise, guided alignment between the alpha and the beta flanges is achieved by external means.

### Conclusion

The Alpha NRF flange allows the operator to easily dock a rigid and bulky system featuring a beta flange to the alpha flange of the isolator system without rotation of the beta flange and precise alignment between the two systems.

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