

## Two-stage differentially-pumped Rotary Platforms



*Take this beauty for a spin*

Differentially pumped rotary platforms provide 360° of continuous rotary freedom through the wall of any vacuum system. The DPRF-series have two stages of differential pumping isolated by fluorocarbon seals on precision sealing surfaces. The rotating stage runs on high strength ball bearings. This allows the unit to be successfully used with manipulators and other precision positioning devices. All DPRF-series platforms come with a fine adjust worm drive and 0.1° vernier scale for easier and more accurate angle adjustment.



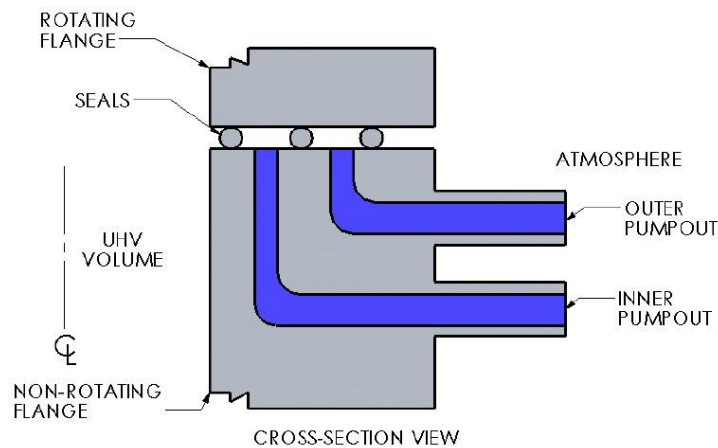
## Performance:

The excellent performance of our rotary platform coupled with a simple, low maintenance design gives maximum value. The fine adjust worm has bearings at both ends, thereby eliminating deflection and inaccuracies. Worm gear backlash is reduced to <math><0.05</math> degrees. The bolt holes on both flanges are tapped full depth for use with standard length flange hardware. This means no need to shorten standard fasteners. Fluorocarbon seals are double-differentially pumped to provide base pressures in the

The DC motor option includes a variable speed drive controller and pendant switch. **Stepper motor** drives are also available.

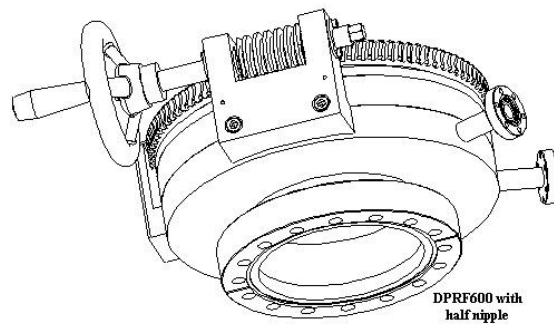
## *How a differentially-pumped rotary seal works*

Sometimes it becomes necessary to introduce rotating motion into a ultra-high vacuum (UHV) vessel while simultaneously providing access for electrical, cooling and auxiliary motions. The graphic below shows a cross section of a typical, differentially-pumped rotating seal.

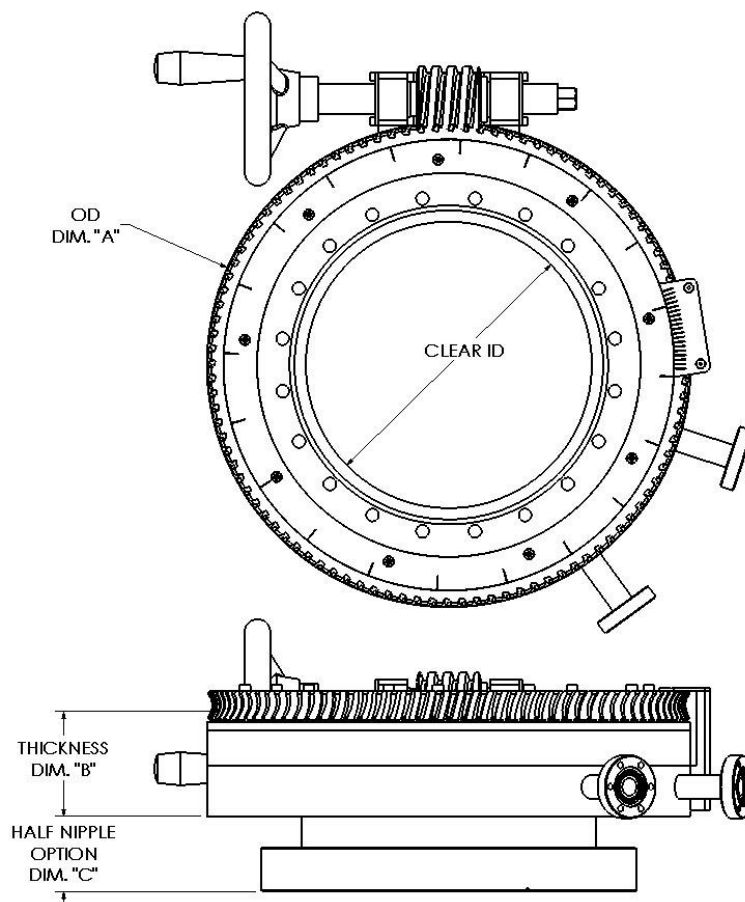


On HDPRF450 and larger, there are multiple mounting locations for the index plate and fine adjust drive. This means the fine adjust drive can be positioned almost anywhere relative to the pump-out ports, ensuring compatibility with any installation. Ask for User's manual for more information.

The integral half-nipple option, for mounting to an existing tapped flange, saves space, hardware, time and money



## Drawing and Ordering Information



## Part Numbers and Dimensions

### Differentially-pumped Rotary Platforms

Model	Flange Size	Clear Bore	Outer Diameter Dim. "A"	Thickness Dim. "B"	Half Nipple Dim. "C"	Axial Load Capacity	1/2 Nipple Option <i>(Add)</i>	DC Motor Option <i>(Add)</i>	Stepper Motor <i>(Add)</i>	Price (w/fine adjust)	Shipping weight Without - With 1/2 nipple option
<b>HDPRF 275</b>	2.75 (70)	1.53 (38)	4.50 (114)	1.98 (50.2)	1.10 (28)	150 lbs (68 kg)		Consult factory			11 lbs (5 kg)    13 lbs (6 kg)
<b>HDPRF 450</b>	4.5 (114)	2.87 (73)	6 (150)	1.90 (48)	1.45 (36.8)	270 lbs (122 kg)		Consult factory			15 lbs (7 kg)    18 lbs (8 kg)
<b>HDPRF 600</b>	6.0 (150)	4.05 (102.3)	8.50 (216)	2.50 (63.5)	1.45 (36.8)	450 lbs (204 kg)		Consult factory			34 lbs (16 kg)    39 lbs (18 kg)
<b>HDPRF 800</b>	8.0 (200)	6.05 (153)	10.50 (267)	2.62 (66.5)	1.60 (40.6)	600 lbs (270 kg)		Consult factory			47 lbs (21 kg)    52 lbs (24 kg)
<b>HDPRF 1000</b>	10.0 (254)	8.05 (204)	12.80 (325)	2.75 (70)	1.60 (40.6)	1200 lbs (545 kg)		Consult factory			70 lbs (32 kg)    77 lbs (35 kg)
<b>HDPRF 1200</b>	12.0 (300)	10.05 (254)	15.82 (402)	2.75 (70)	4.62 (117)	1600 lbs (545 kg)	-	Consult factory	-		92 lbs (42 kg)    103 lbs (47 kg)
<b>HDPRF 1400</b>	14.0 (355)	12.05 (305)	17.87 (454)	2.75 (70)	4.62 (117)	2000 lbs (900 kg)	-	Consult factory	-		104 lbs (47 kg)    117 lbs (54 kg)

Stepper Motor Controller for any of the above, first axis\*, add Consult factory

\*Additional axes (may be combined - consult factory), add Consult factory

Other sizes available on request

All sizes in inches (millimeters)

## *Cross-over Manifold*

When using both differentially-pumped volumes, it is necessary to rough the high vacuum volume before starting the pump. The cross-over manifold allows this.



Connect the Inner volume port to the high vacuum pump (usually an ion pump) and connect the Outer volume port to the roughing pump. Open the all metal, bellows-sealed cross-over valve to rough both sections. Then close the valve and start the high vacuum (ion) pump. Piece o' cake.