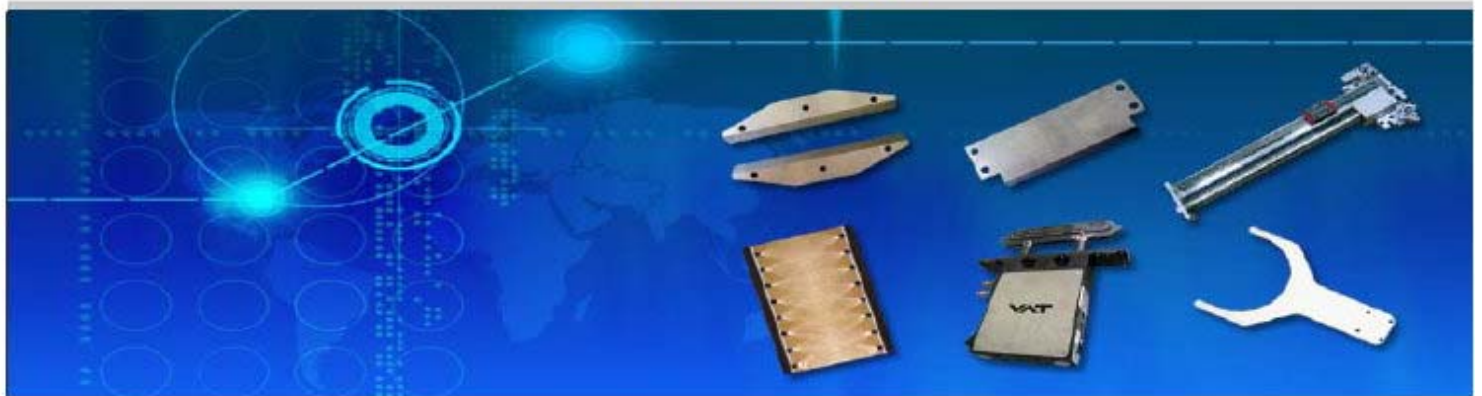


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Applied CMP Pad Conditioner Assembly

Total solution



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1. Pad Conditioner

- * Better stable down force
- * Longer Lifetime Performance

2. 彈片模組

- * Better stable down force
- * Longer Lifetime Performance



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Old and New Type Pad Conditioner

Old Type



New Type



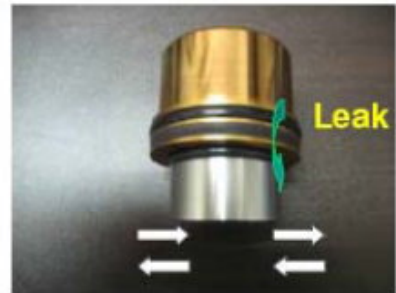
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Old Type Pad Conditioner Axis Pictures



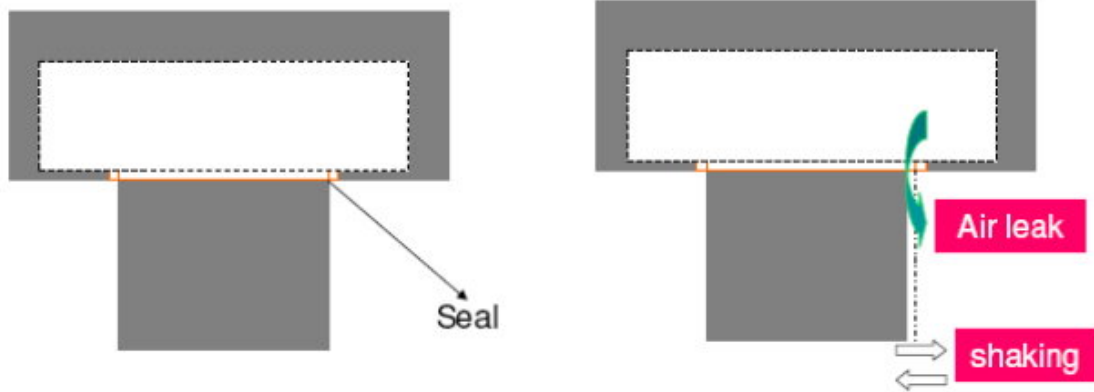
Shaking



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Old Type Pad Conditioner Leak and Shaking Issue



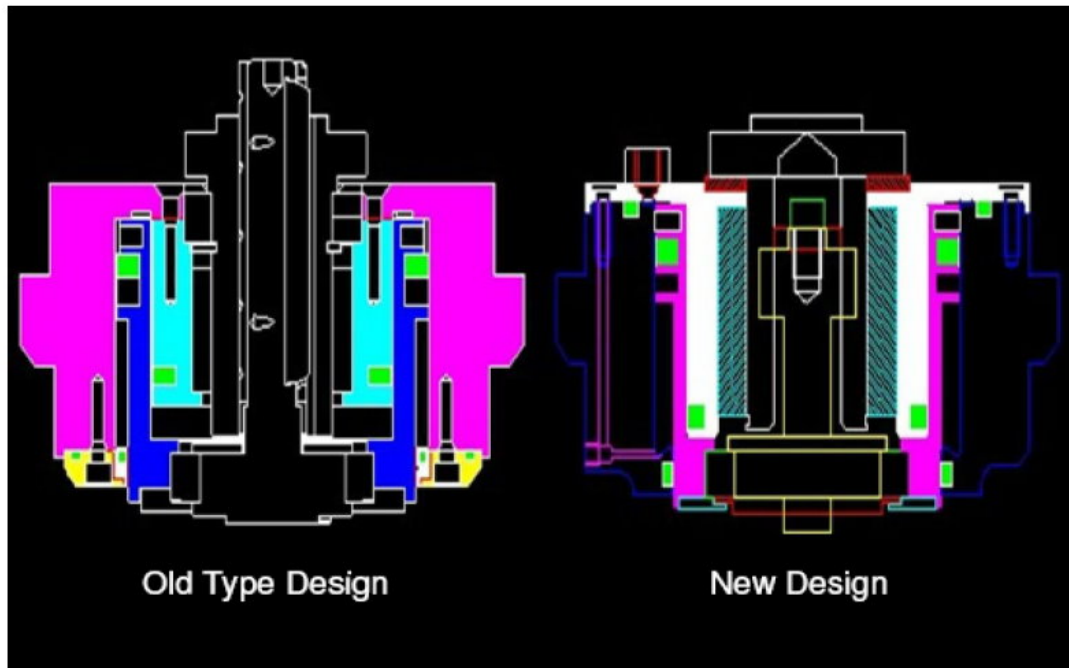
1. Up and Down force will result the axis aging, And the axis surface material will loss, let the axis size become smaller. Any point loss in the axis will result in the axis shaking and the air seal leak when execute the pad condition action.
2. Both air seal leak let the down force unstable and axis shaking will let the condition result become worse and reduce the pad lifetime.





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Old Type and New Type Conditioner CAD Design

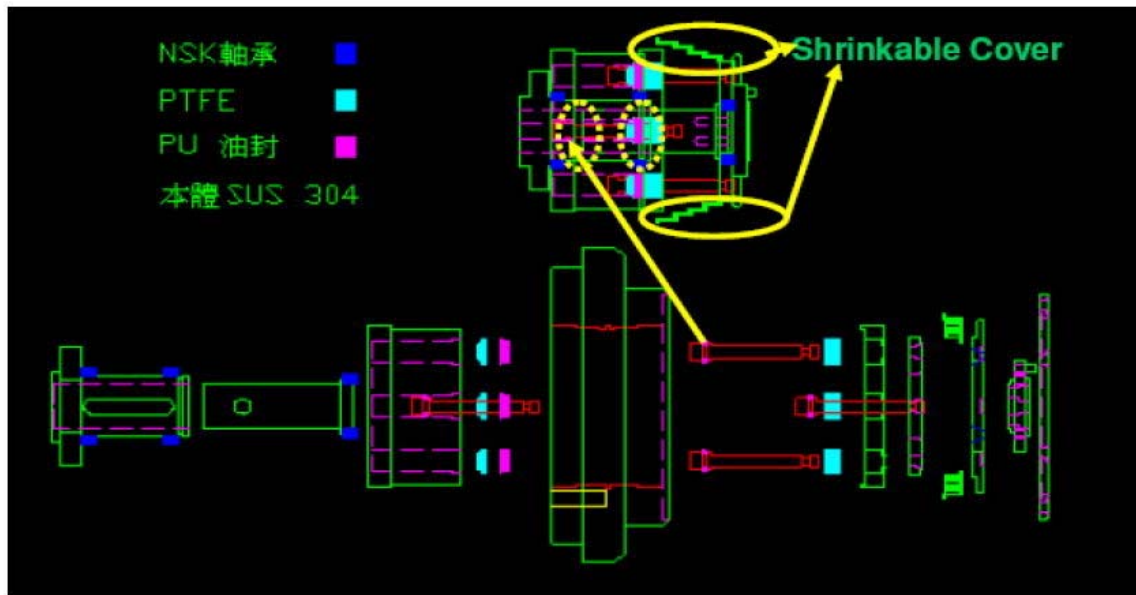


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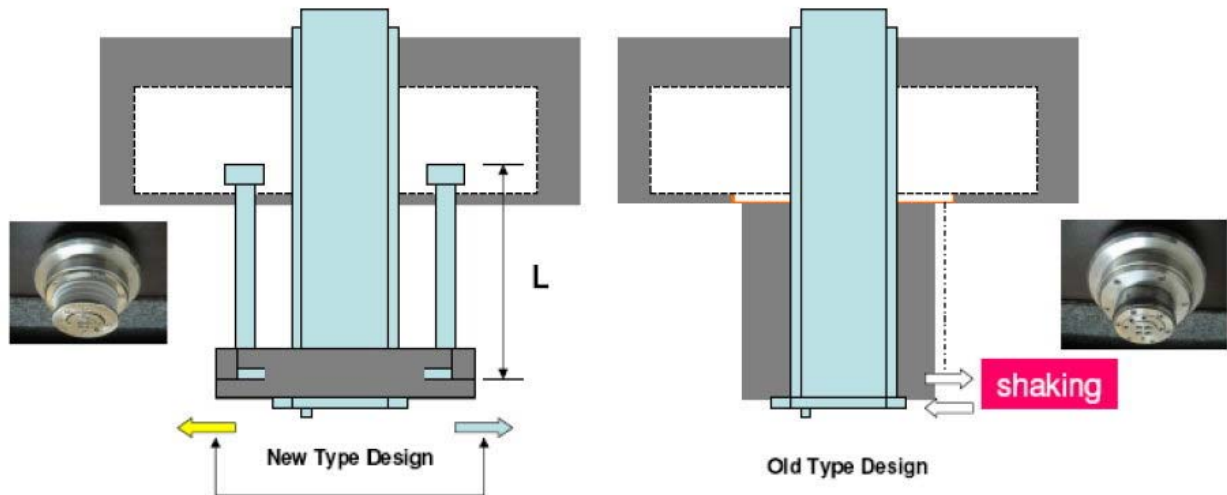
Air Leak Prevention



1. At least two layer seals to prevent the air leak.
2. The added shrinkable cover is to prevent the water or slurry splash and



Anti-Shaking Improve



1. Modify one axis to multi-axis to improve the shaking issue.
2. Using latch structure instead of screw to improve the parallel.
3. L length can be adjustment.





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Pad Conditioner Conclusion



1. New Type Pad Conditioner can be easily doing the rotate action.
2. Pushing up and down action just need very low gas pressure.
3. Within a long time stress the new type structure can have better anti-shaking and leakage performance then the old type. But the real life time need to be tested in the real machine.
4. Air leakage had been test with full gas within 24hrs and then immersion in the Alcohol to check the bubble appear or not .



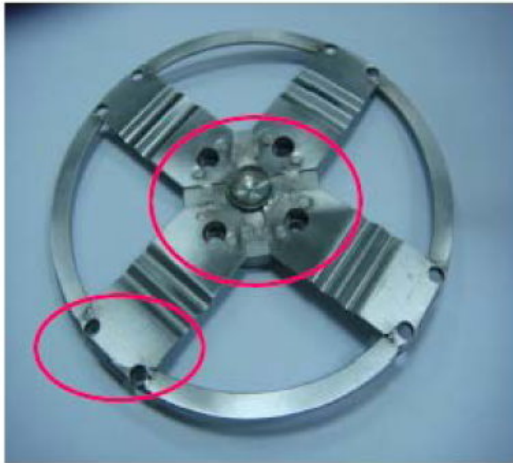
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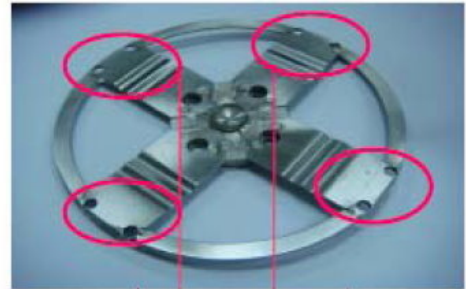
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Old Type 彈片 接合方式及缺點



彈片組合方式為:a. 焊接 + b. 鑲合
損壞因素為: 焊接點易於作動中撕裂



且撕裂處斷點(焊接點)



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New Type 彈片 接合方式及缺點



本發明為避開焊接組合，僅使用铆釘铆合，且彈片為一體成型不易斷裂使用壽命長，
於V** (I) 已實際使用超過90天未損壞



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Old Type 彈片 組合方式

1. 底板



3. 置防水片



2. 置入彈片組合



4. 置上蓋
鎖螺絲



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