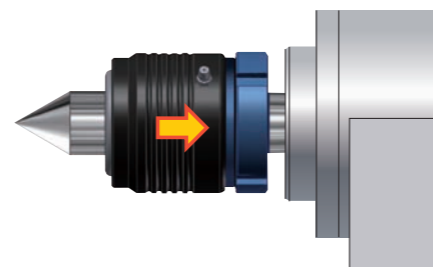


活動頂針(附鎖緊螺帽)使用方法 Manual For Live Center With Draw Off Nut

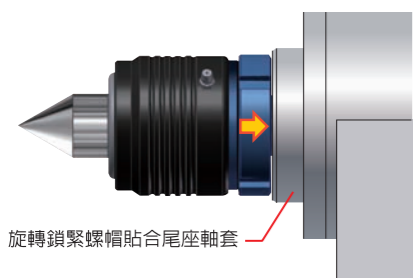
1. 插入尾座軸孔前先擦拭頂針錐柄，並將鎖緊螺帽旋靠頂心柄。
Before inserting, please wipe the center's shaft and turn the draw-off nut tight with center's handle.



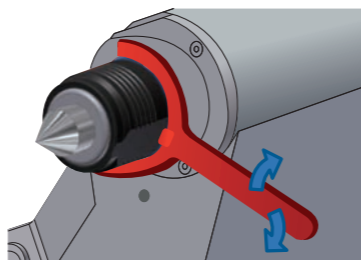
2. 請將頂針錐柄插入尾座軸孔。
Please insert center's shaft into tailstock.



3. 再將鎖緊螺帽以手旋轉貼合尾座軸套端面。
please turn the draw-off nut close up the face of tailstock.



4. 退出活動頂針時，以所附扳手旋轉螺帽。
When take out the center, please turn the draw-off by attached spanner.



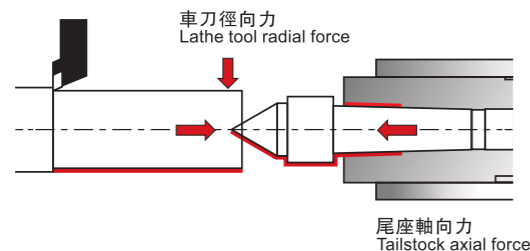
頂針附螺帽重要性

備注：紅線區為徑向力受力區
The importance of the centers with draw-off nut. Remarks: Red line is force area of radial force.

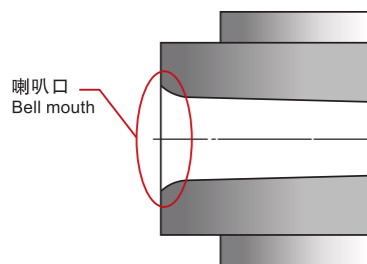
一般頂針受力圖

Common center without draw-off nut force graphic

1. 長時間使用後，尾座軸套內孔易成喇叭口。
After long time using, the inner bore of tailstock sleeve is easy to be bell mouth.



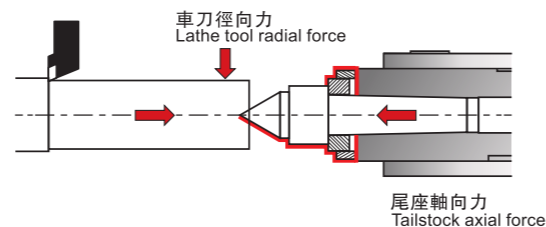
2. 熱影響內孔會隨着溫度上升擴大，冷機時頂針拔不出來。
The inner bore will be impacted with temperature, the center is very hard to pulled out under normal temperature conditions.



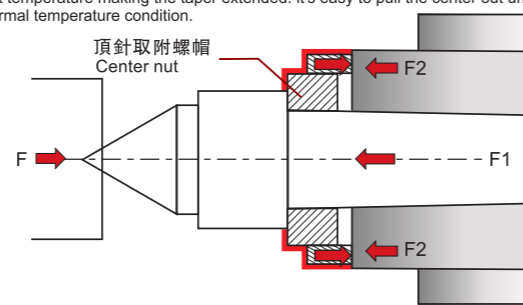
使用附螺帽頂針受力圖

The centers with draw-off nut force graphic

1. 頂針之螺帽加大接觸受力面積，減低尾座軸套受力，使軸套內孔不會變成喇叭口。
The draw-off nut can increase the force area, reduce the force of sleeve of the tailstock, and avoid the sleeve of tailstock to be bell mouth.



2. 有效防止溫度上升錐度擴大使頂針插的更深，冷機時頂針容易取出。
It can effectively avoid the center is deeply inserted into the tailstock caused by the hot temperature making the taper extended. it's easy to pull the center out under normal temperature condition.



頂針使用技術要點說明

Technical Instructions for Centers

Question&Answer



Q1 頂針主體剖半的作用 THE EFFECT OF CUTTING PLANE OF CENTER'S HANDLE BODY

ANS: 小徑車削加工時，刀座不易碰撞頂針(閃刀座作用)。
When machining small diameter workpiece, the centers can avoid interfere the tools turret.

Q2 油嘴的優點(可舊油換新油, 延長頂針壽命) THE OIL NIPPLE'S ADVANTAGES--WHICH IS OUR PATENT.

ANS: 因頂針本身無動力，需靠頂針孔傳動，油封需緊配，無法緊配，導致無法百分之百防水，切削時切削液會滲入內部，導致培林壽命減短，此時可以利用油嘴換油把切削液排出，則此頂針可延長4倍以上壽命。
換油方式：頂針連續使用8小時或加工完後不使用時，讓頂針頂住工件慢速旋轉約100~200轉每分鐘，然後將頂針專用潤滑油注入油嘴，讓舊油與切削液從出油孔排出直到乾淨的油流出為止，然後將頂針外部切削液擦乾淨。
• 本頂針指定使用SKF LGMF2專用油。

The oil nipple can be used to fill into the grease and change the old grease in the center, it can prolong the centers working life. The oil changing method: after finished processing, please use the live center to prop up workpieces and turn slowly by around 100 -200 RPM, and fill the grease of SKF LGMF2 into the nipple, let the old oil and cutting fluid discharge from the oil outlet until the new oil flow out, and then stop filling into the new oil, wipe up the live center's surface, please maintain your live center like this which can prolong the live center's working life more 3 times.

Notes: SKF LGMF2 grease is appointed to lubricate our live centers. This maintenance also can avoid bearing rusting, it can discharge the water or cutting fluid by changing old oil.

Q3 頂針附螺帽的優點 THE DRAW-OFF NUT ADVANTAGES

ANS: 附螺帽頂針與尾座套筒錐度結合後，將螺帽轉至套筒平面貼合，將會加強頂針與尾座套筒的剛性，使套筒錐度內孔不會造成橢圓孔，能有效防止頂針錐度往內擠壓，可達到容易拆解。
When the draw-off nut is close to the tailstock sleeve, it will enhance the rigidity of the centers and tailstock sleeve, it can avoid that the tailstock sleeve become bell mouth. It also effectively avoid the center is shoved deeply, so it can be easy to take the center out.

Q4 新品頂針與尾座套筒無法緊密貼合問題 THE CENTER CAN'T CLOSELY MATCH THE TAILSTOCK SLEEVE

ANS: 此現象是新機臺才會有問題，請將頂針錐柄及尾座套筒內孔錐度上所殘留油霧務必擦拭乾淨為止，再重新安裝頂針，才不會導致無法貼合。
For this issue, it usually occurred on the new CNC machines, please clean and wipe up the center's taper-shank and the tailstock sleeve, and then remount it.

Q5 頂針尖部容易磨損原因 THE REASON OF CENTER'S HEAD ABRASION

ANS: 頂針本身無動力，尾座壓力不夠，會導致工件與頂針無法同步轉動，造成頂針尖部容易磨損。
The workpiece slipping caused by not enough pressure of the tailstock can cause the center's head abrasion or the workpiece center's moving, it will impact the turning work stability, the tailstock's pressure should be adjusted according to different processing requirements, if this situation, please adjust proper tailstock pressure and make the center's rotating speed and lathe machine spindle rotating speed synchronization, it will avoid this center's head abrasion issue.
How to know the pressure of the tailstock enough or not?
Please mark one line both the workpiece and center's head, after processed, if the mark line moved, it indicates the pressure of the tailstock is not enough, the pressure need increasing until the mark line never moved.

Q6 為什麼頂針會發燙, 甚至會冒烟 WHY DO NEW LIVE CENTERS GET HOT AND HAVE SMOKING PHENOMENON

ANS: 本公司所製造的每支活動頂針，軸承設計採用高預壓值緊密配製，加上使用時熱脹冷縮之原理，故在高速旋轉所產生的溫度達50度上下，加工時切削液噴在頂針上會有冒烟現象(屬於正常現象)，軸承經磨合期穩定後溫度就會下降，且不會有鬆動不穩定的情形產生，因此使用壽命更長。
一般頂針不發燙的原因是因為軸承採用預壓值鬆配配製，其缺點是經使用一段時間，磨合期過後軸承就會產生鬆動導致車削尺寸不穩定會有鈍刀的情形，因此軸承易損壞壽命會減短。
During the usage for new live centers, the center's temperature will reach 50-60 Celsius, it's normal situation, after the run-in period, the temperature will drop slowly, the live center will keep working stably. Because the live center's body temperature is high, it will come out water evaporation when the cutting fluid is sprayed on the centers, it's normal.

Q7 新品頂針剛使用時會有漏油現象 WHY DO NEW CENTER HAVE THE OIL LEAK PROBLEM

ANS: 頂針製造完成包裝前，會將頂針注滿潤滑油，所以新品使用時，軸承高速旋轉，會將多餘的油從油孔排出，才會有漏油，這是正常現象。
The new center is fully filled the grease, during the usage, the excess oil will discharge from the oil outlet.

如頂針有故障後，請勿自行拆解，本公司製造頂針已有30餘年技術與經驗，可研發各類客製型特殊頂針，國內外任何廠牌均可維修。

If there is any issue on the centers, please don't disassemble it by yourself and contact with Omatei company for help.