**SPINDLE COOLING UNIT :-**

Heat is generated by headstock bearing and gears of machine tools. The entire main spindle heats up and the spindle deviates from the center of the column and head, which results in poor accuracy.  
 This is 40～70%　of the reason that there are differences in temperature among machine parts.   
National Cooling System’s Spindle Cooling unit will control heat generation at the headstock, and the thermal deviation will be eliminated. Spindle Cooling Unit lubricates the headstock gears and removes the heat generated. This function is helpful to improve machine accuracy. This function is helpful to improve machine accuracy.

**APPLICATION**

* Machine tool
* Hydraulic press
* Pressure die casting
* Furnaces

**FEATURES**

* Single phase preventor for cooling system
* In case of low pressure LP/HP switch turn off.
* Solenoide valve & delay timer
* Hermetically sealed air cooled emersion
* Digital control system.
* Safety fuse for main & compressor
* Built in overload protection for compressor

**OPTIONS**

* Potential free alarm for high and low temperature
* High / Low pressure switch
* Fan failure alarm module
* Water-cooled condenser for high ambient environment
* Custom built size for replacement of imported units and special applications
* Flow switch
* Ante freezing switch

**TECHNICAL DETAILS OF SPINDLE COOLING UNIT WITHOUT TANK :-**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Model** | **Compressor** | **Power Supply** | **Cooling Capacity**  **(Kcal/Hr)** | **Refrigerant** | **Dimension**  **(L X W X H)**  **in mm** | **Oil Flow Rate**  **(LPM)** | **Inlet & Outlet Connection** |
| **NSCU**  **0.3** | **Recip** | **1 Phase,**  **230 Volts, 50 Hz** | **900** | **R-134 a** | **500 X 450 X 600** | **8** | **½ ”** |
| **NSCU**  **0.75** | **Recip** | **1 Phase,**  **230 Volts, 50 Hz** | **2250** | **R-22** | **580 X 550 X 650** | **15** | **¾”** |
| **NSCU 1.0** | **Recip** | **1 Phase,**  **230 Volts, 50 Hz** | **3000** | **R-22** | **580 X 550 X 650** | **15** | **¾”** |
| **NSCU 1.0** | **Recip** | **3 Phase,**  **415 Volts, 50 Hz** | **3000** | **R-22** | **580 X 550 X 850** | **20** | **¾ ”** |
| **NSCU 1.5** | **Recip** | **3 Phase,**  **415 Volts, 50 Hz** | **4500** | **R-22** | **650 X 650 X 1100** | **32** | **¾ ”** |
| **NSCU 2.0** | **Recip** | **3 Phase,**  **415 Volts, 50 Hz** | **6000** | **R-22** | **650 X 650 X 1100** | **40** | **1 ”** |

**TECHNICAL DETAILS OF SPINDLE COOLING UNIT WITH TANK :-**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Model** | **Compressor** | **Power Supply** | **Cooling Capacity**  **(Kcal/Hr)** | **Refrigerant** | **Dimension**  **(L X W X H)**  **in mm** | **Oil Flow Rate**  **(LPM)** | **Oil Tank (Ltrs)** | **Inlet & Outlet Connection** |
| **NSCUT**  **0.3** | **Recip** | **1 Phase,**  **230 Volts, 50 Hz** | **900** | **R-134 a** | **600 X 500 X 800** | **8** | **10** | **½ ”** |
| **NSCUT**  **0.75** | **Recip** | **1 Phase,**  **230 Volts, 50 Hz** | **2250** | **R-22** | **650 X 600 X 800** | **15** | **20** | **¾”** |
| **NSCUT.0** | **Recip** | **1 Phase,**  **230 Volts, 50 Hz** | **3000** | **R-22** | **650 X 600 X 800** | **15** | **20** | **¾”** |
| **NSCUT 1.0** | **Recip** | **3 Phase,**  **415 Volts, 50 Hz** | **3000** | **R-22** | **650 X 600 X 800** | **20** | **20** | **¾ ”** |
| **NSCUT 1.5** | **Recip** | **3 Phase,**  **415 Volts, 50 Hz** | **4500** | **R-22** | **700 X 700 X 1100** | **32** | **25** | **¾ ”** |
| **NSCUT 2.0** | **Recip** | **3 Phase,**  **415 Volts, 50 Hz** | **6000** | **R-22** | **700 X 700 X 1200** | **40** | **30** | **1 ”** |