

The following specifications apply: **Lot One:** Items manufactured by one of the manufacturers listed below are the only approved brands. Bids containing items from other brands shall be found non-responsive and will be rejected by the state.

Caterpillar, Kennemetal, Black Cat, Bucyrus, Kueper, or Valk Manufacturing

LOT ONE: DUAL OR PAIRED CARBIDE INSERT BLADES

- Blades shall be flat, hot-rolled steel, must meet or exceed SAE 1020 specifications.
- Blades shall be top punched 1.5" inches from the top of the blade to the center of the line of bolt holes. The first two holes on each end of the blade shall be 3" inches apart, center-to-center, the remaining holes shall be 6" inches apart center-to-center. Example: (3"-3"-6"-6"-6"-6"-3"-3").
- The top edge of the blade (opposite the carbide edge) shall be beveled at a 32 degree angle leaving an approximately .34 inch blunt dimension at the end of the blade to fit to motor grader moldboards.
- There shall either be two rows of Tungsten carbide inserts or paired carbide inserts that is brazed into an open-faced recess along the entire bottom edge of the blade.
- If offering two rows of Tungsten Carbide inserts, the front row of inserts shall be rectangular and measure approximately .75" inches high x .32" inches thick with each insert approximately 2" inches long.
- If offering a paired carbide insert, the inserts must measure approximately .75" inches high x .32" inches thick with each insert approximately 2" inches long.
- The front row of inserts shall be a grade SP341 Macro crystalline type WC, tungsten carbide insert with a hardness of 83.5 - 85.0 on the Rockwell "A" scale.
- The second rear row of inserts shall be trapezoidal and measure approximately .63" inches high x .38" inches thick with each insert approximately 1" inch long.
- The bottom angle shall be 25 degrees with a 1/16" inch minimum nose radius.
- The second row of inserts to be a high shock WC grade of tungsten carbide with 11% to 12.5% cobalt content with a hardness from 87.5 (min.) to 89.0 (max.) on the Rockwell "A" scale.
- Blade thickness shall be 7/8 inch.

In addition to the above, and, as identified on the bid schedule:

The length of the blade identified on the bid schedule shall be one of the following standard sizes:

7-a: 2 feet	7-b: 3 feet	7-c: 4 feet	7-d: 5 feet	7-e: 6 feet
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The width of the blade identified on the bid schedule shall be one of the following standard sizes:

7-f: 5 inches	7-g: 6 inches	7-h: 8 inches
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The thickness of the blade identified on the bid schedule shall be the following standard size:

7-i: 7/8 inch

The blades shall be hole punched with square countersunk holes and as identified on the bid schedule, shall be one of the following standard sizes:

7-j: 5/8 inch diameter bolts	7-k: 3/4 inch diameter bolts
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