

Grant County Public Works
 124 Enterprise Street S.E.
 Ephrata, Washington 98823
 (509) 754-6082 Fax (509) 754-6087
jwawers@grantcountywa.gov



October 26, 2017
 Attn: Equipment Suppliers
 Re: Supply Carbide Cutting Edges/Blades

QUOTE SHALL BE RETURNED BY: 5:00 P.M., November 8, 2017

Your company is requested to provide a quote to furnish and deliver carbide grader bits. Further specifications are listed below.

You may print a copy of this document, enter the necessary information and return via:

E-mail: jwawers@grantcountywa.gov

Fax: Grant County Public Works (509) 754-6087

Mail: Grant County Public Works
 124 Enterprise Street S.E.
 Ephrata, WA 98837
 Attn: Jerome Wawers, Carbide Cutting Edge/Blade Quote

Provide the cost to furnish and deliver F.O.B.:

Grant County Public Works
 124 Enterprise Street S.E.
 Ephrata, WA 98823

the following items meeting the specifications:

Description	Quantity	Unit Price	Extended
Kennametal 3ft. Dual-Carbide Blade, Part Number 1011872 or equivalent	2		
Kennametal 4ft. Dual-Carbide Blade, Part Number 1011875 or equivalent	2		
Kennametal 3ft. DCI Cover Blade, Part Number 2492564 or equivalent	2		
Kennametal 4ft. DCI Cover Blade, Part Number 2478681 or equivalent	2		
Kennametal 3ft. Snow Removal Blade, Part Number 1011883 or equivalent	10		
Kennametal 4ft. Snow Removal Blade, Part Number 1011885 or equivalent	24		

Description	Quantity	Unit Price	Extended
Snow Plow Cover Blade / Face Plate 10ft. Wear Resistant Steel	7		
Snow Plow Cover Blade / Face Plate 12ft. Wear Resistant Steel	7		

Sub-Total	
Tax	
Shipping	
TOTAL	

Quote Evaluations

Quote evaluations shall include, but not be limited by, the following criteria:

- Past performance of product
- Conformance to specifications
- Price (*may include life cycle*)
- Quality of product

General Specifications:

This quote spec references Kennametal Dual-Carbide Grader Edges (Blades).

1. BLADE

1.1 The blade shall be 7/8" thick x 5" wide, flat hot-rolled finished SAE 1040 steel or equivalent.

1.2 Punching shall be 11/16' square holes with countersink to receive either 5/8" or 3/4" diameter plow bolts as required. Location of holes to be in accordance with AASHTO standards for "heavy-duty" punching.

1.3 The groove for carbide inserts shall be milled on the blade edge in accordance with attached drawing.

1.4 Center of holes shall be in line within 1/32" of established centerline.

1.5 The tolerance on the length of the steel portion of the blade to be +0.0/-0.06

2. TUNGSTEN CARBIDE INSERTS

2.1 Face inserts to be Kennametal grade SP341 formulated using Macrocrystalline type WC manufactured via menstruum process and yielding a stoichiometric composition.

a) Face Insert Characteristics

Hardness of Face Inserts: 83.5 – 85.0 Rockwell A

Transverse Rupture Strength: 330,000 psi min.
Density: 13.25 – 13.65 (grams/cm)

2.2 Center inserts to be a high shock WC grade of tungsten carbide with 11 to 12.5 percent cobalt content.

2.3 Face Insert Dimensions

Height: 0.745" +/- .005
Width: 0.310" +/- 0.010
Length: 2.0" Nominal

2.4 Center Insert Dimensions

Height: 0.635" +/- 0.005 (long side)
Width: 0.365" +/- 0.010
Length: 1.0" Nominal
Bottom Angle: 25 degrees with a nose radius of 1/16" min.

2.5 The carbide insert manufactures to furnish certification to the requisitioning agency that face and center inserts meet all specification as set forth in 2.1 through 2.4

3. BRAZING

3.1 Brazing material shall be a high strength alloy type.

3.2 The inserts shall be brazed in place using induction brazing consistent with sound brazing practice with no evidence of voids in the braze joint.

This quote spec references Kennametal Snowplow Blade Cutting Edges (Blades)

BLADE

1.1 The blade shall be 7/8" thick x 5" wide, flat hot-rolled finished steel to meet or exceed specifications for 1040 type steels.

1.2 Punching shall be 11/16" or 13/16" square holes with countersink to receive 5/8" or 3/4" diameter plow bolts. Location and spacing of the holes shall be as specified by the user.

1.3 The groove for the carbide inserts shall be milled in the center of the blade edge.

1.4 Center of holes shall be in line within 1/32" of established horizontal centerline and 1/16" of established vertical centerline.

Tungsten Carbide Inserts

2.1 The inserts shall be a high shock WC grade of tungsten carbide with (11 to 12 ½) percent cobalt content.

Density: 14.1 Minimum to 14.6 Maximum (grams/cm)
Hardness: 87.5 Minimum to 89.0 Maximum, Rc. "A" Scale
Transverse Rupture Strength (psi): 350,000 Minimum
Porosity: (Based on testing in accordance with ASTM designation B276-79)
A06, B02, C00

2.2 The carbide insert manufacturer to furnish to Grant County Public Works that the inserts meet the specifications as set forth in 2.1.

2.3 The inserts shall be a trapezoid design of the following dimensions:

Height: 0.635" +/- 0.005 (long side)

Width: 0.365" +/- 0.010

Length: 1.0" Nominal

Bottom Angle: 25 degrees with a nose radius of 1/16" min.

2.4 A metallurgical evaluation of the carbide insert shall show no evidence of cross grade contamination. Evaluation to be based on a photomicrograph of a polished and etched specimen at 500x magnification.

3. BRAZING

3.1 The brazing material shall be a high strength alloy type

3.2 The tungsten carbide inserts shall be positioned in the milled groove at approximately 0.010" between the inserts the entire length of each cutting edge section.

3.3 The inserts shall be brazed on all sides consistent with sound brazing practice with no evidence of voids or the use of shims.

3.4 Each blade section to contain one insert, on inch nominal length for each inch of blade section length. Due to the thickness of the braze joints between inserts it may be necessary for several inserts to be slightly shorter or longer than the nominal 1.0" length to insure the carbide insert runs the entire length of the blade without protruding from the end of the steel body.

4. SPECIFIC REQUIREMENTS

4.1 The difference between the highest and lowest tip point (on any two adjacent inserts) not to exceed 1/32" on any given blade assembly.

4.2 The finished blade section shall be free of warpage and longitudinal deviation not to exceed 1/8" in a for-foot blade section.

4.3 Each blade section shall be identified with manufacturers, identification stamp.

4.4 The finished blade sections shall have marking showing the front edge of the blade to avoid improper mounting.

Please provide the following information (additional sheets may be added):

Manufacturer: _____ Product Name/No.: _____

Description: _____ Delivery ARO: _____

Deliveries must be scheduled between 8:00 A.M. to 3:00 P.M., Monday thru Thursday. If you are awarded the Quote, please call (509) 754-6086 at least one day prior to delivery to make arrangements.

If you have questions please contact: Jerome Wawers, (509) 754-6082, jwawers@grantcountywa.gov

In compliance with Chapter 39.34.030(5) b RCW a public notice for this solicitation for quotes has been posted on Grant County's website: <http://www.grantcountywa.gov/GCPW/RFBQS/RFBQS-2017.htm>

1. The Bidder will allow Grant County to purchase additional quote items at the original bid prices offered Yes ___ No ___
2. The Bidder will allow other public agencies to purchase additional quote items at the original prices offered (RCW 39.34)..... Yes ___ No ___
3. The Bidder will allow modification on quote items for additional purchase requests (subject to wholesale price adjustments agreeable to each public agency)..... Yes ___ No ___
4. The Bidder agrees to provide extended purchase options thru March 15, 2018..... Yes ___ *No ___
 *If "No" is checked please show acceptable extended purchase period.....
5. The Bidder understands Grant County accepts no responsibility for the payment of any additional purchase requests make by other public agencies..... Yes ___ No ___
6. The Bidder understands Grant County is not required to purchase additional quote items..... Yes ___ No ___

PROPOSAL MUST BE SIGNED →

Signature of Authorized Official(s)

Please Print Name of Authorized Official(s)

Firm Name _____

Address _____

City, St., Zip _____

Email _____

Voice (____) _____

Fax (____) _____

State of Washington License No. _____

Note:

- (1) This proposal form is not transferable and any alteration entered heron without prior permission from or by the County Engineer will be cause for considering the proposal irregular and subsequent rejection of the quote.
- (2) Should it be necessary to modify this proposal either in writing or by electronic means, please make reference to the following proposal in your communication: **Carbide Cutting Edge/Blade Quote.**

Kennametal Dual Carbide Insert Grader Blade Machining

