

Phone (520) 626-5231 (520) 621-1156 FAX (520) 626-9333

May 19, 2009

Greetings:

The Large Binocular Telescope Observatory (LBTO) on behalf of the Large Binocular Telescope Corporation (LBTC) invites you to submit a quotation to manufacture components for the Hardpoint Assemblies for the Large Binocular Telescope.

Bid Format and Submission

Only firm, fixed price quotations on the attached form to produce the components as depicted on the included drawings will be accepted. Please include tax and shipping charges in the spaces provided if these are not already included in the price.

Bids may be submitted in person, by mail, courier, or fax to:

ATTN: Grisela Koeppen Large Binocular Telescope Observatory Room 552 933 N. Cherry Tucson, AZ 85721 (520) 626-5231 (520) 626-9333(Fax)

Bids must be received by 12:00 noon on June 8, 2009.

Technical questions should be addressed to Bob Meeks, (520) 626-2016 or to Joe Devries at . All other questions should be addressed to Grisela Koeppen, (520) 626-5231.

There will be no public bid opening and all bids will remain confidential. Award will be based on the following criteria:

- Total price
- Ability to deliver within the required schedule

LBTO expects to issue a purchase order by June 12, 2009.

LBTO reserves the right to visit any bidder's facility for inspection prior to award and consider information from the inspection in its award decision. Failure to allow an inspection visit could result in disqualification.



Scope of Work

Provide material, weld, machine as required, and deliver the following components in accordance with the enclosed LBTO drawings:

| Drawing No. | Title | Quantity |
|-------------|--|----------|
| | | Required |
| 725s521 | Keep ring | 28 |
| 725s522 | Mount, angular encoder bearing | 14 |
| 725s523 | Shaft, angular encoder | 14 |
| 725s524 | Pin, expansion | 14 |
| 725s525 | Mount, angular encoder | 28 |
| 725s526 | Retainer, angular encoder bearing | 14 |
| 725s527 | Shim, Angular Encoder Bearing, .001" thk | 70 |
| 725s528 | Shim, Angular Encoder Bearing, .002" thk | 70 |
| 725s529 | Shim, Angular Encoder Bearing, .005" thk | 28 |
| 725s530 | Nut, Expansion Pin | 14 |
| 725s531 | Retainer, Roller Nut | 14 |
| 725s532 | Inner Retainer, Roller Nut | 14 |
| 725s533 | Adaptor | 14 |
| 725s534 | Extension Arm | 14 |
| 725s535 | Piston, Upper | 14 |
| 725s536 | Piston, Lower | 14 |
| 725s537 | Extension, Breakaway Shaft | 14 |
| 725s538 | Retainer, Lower Piston | 14 |
| 725s539 | Breakaway Shaft Flange | 14 |
| 725s540 | Breakaway shaft | 14 |
| 725s541 | Cylinder Cap | 14 |
| 725s542 | Clamp, encoder | 14 |
| 725s543 | Flexure Capture | 14 |
| 725s544 | Flexure, Lower | 14 |
| 725s545 | Adaptor, Puck / Load Cell | 14 |
| 725s546 | Bracket, Torsional breakaway | 14 |
| 725s547 | Mount, Anti-torsion Switch & Plunger | 28 |
| 725s548 | Spacer, Load Cell | 14 |

Delivery of all the completed components is desired by July 22, 2009 based on the expected award date of June 12, 2009. If this delivery schedule cannot be met, LBTO can also accept half the total required quantity of each component by that date with the balance within 60 days following. The delivery location will be at the University of Arizona. Delivery must be prearranged with LBTO or it may be rejected.

Thank You,

Bob Meeks LBT Observatory LBT Observatory 933 N. Cherry Avenue Room 552 University of Arizona Tucson, AZ 85721 USA



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QUOTATION Hardpoint Production Components

Bidder:

| Line | Dwg No. | Description | Quantity Required | Price Each | Total Price |
|------|------------|--|----------------------|---------------|----------------|
| | 10. | | Kequileu | Lacii | rnce |
| 1 | 725s521 | Keep ring | 28 | | |
| 2 | 725s522 | Mount, angular encoder bearing | 14 | | |
| 3 | 725s523 | Shaft, angular encoder | 14 | | |
| 4 | 725s524 | Pin, expansion | 14 | | |
| 5 | 725s525 | Mount, angular encoder | 28 | | |
| 6 | 725s526 | Retainer, angular encoder bearing | 14 | | |
| 7 | 725s527 | Shim, Angular Encoder Bearing, .001" thk | 70 | | |
| 8 | 725s528 | Shim, Angular Encoder Bearing, .002" thk | 70 | | |
| 9 | 725s529 | Shim, Angular Encoder Bearing, .005" thk | 28 | | |
| 10 | 725s530 | Nut, Expansion Pin | 14 | | |
| 11 | 725s531 | Retainer, Roller Nut | 14 | | |
| 12 | 725s532 | Inner Retainer, Roller Nut | 14 | | |
| 13 | 725s533 | Adaptor | 14 | | |
| 14 | 725s534 | Extension Arm | 14 | | |
| 15 | 725s535 | Piston, Upper | 14 | | |
| 16 | 725s536 | Piston, Lower | 14 | | |
| 17 | 725s537 | Extension, Breakaway Shaft | 14 | | |
| 18 | 725s538 | Retainer, Lower Piston | 14 | | |

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| 10 | 595 599 | | | |
|----|---------|--------------------------------------|----|--|
| 19 | 725s539 | Breakaway Shaft Flange | 14 | |
| 20 | 725s540 | Breakaway shaft | 14 | |
| 21 | 725s541 | Cylinder Cap | 14 | |
| 22 | 725s542 | Clamp, encoder | 14 | |
| 23 | 725s543 | Flexure Capture | 14 | |
| 24 | 725s544 | Flexure, Lower | 14 | |
| 25 | 725s545 | Adaptor, Puck / Load Cell | 14 | |
| 26 | 725s546 | Bracket, Torsional breakaway | 14 | |
| 27 | 725s547 | Mount, Anti-torsion Switch & Plunger | 28 | |
| 28 | 725s548 | Spacer, Load Cell | 14 | |
| | | Shipping | | |
| | | Tax | | |
| | | TOTAL PRICE | | |

Terms:

Delivery schedule: