



Linear / Rotary Accessories

1/8 and 1/4 Inch Shaft Components



Features

- UHV and HV compatible construction

Specifications

Material

| | |
|-------------------------|------|
| Shafts, Stainless Steel | 304 |
| Mounts, Aluminum | 6061 |

Vacuum Range

| | |
|-----------------------|--------------------------|
| UHV, Ultrahigh vacuum | 1x10 ⁻¹⁰ Torr |
| HV, High vacuum | 1x10 ⁻⁸ Torr |

Temperature Range ¹

| | |
|-------|-------|
| Up to | 250°C |
|-------|-------|

Notes

1. Overall assembly ratings must be adjusted to that of its lowest rated component. For cryogenic service, the lowest recommended temperature is -80°C
- § Unless specified otherwise, dimensional units in all sections of this catalog are expressed in inches.

Linear / Rotary Accessories

Accu-Glass Products' motion feedthrough accessories are an assortment of in-vacuum hardware components to assist the user when installing motion feedthroughs. Various types of drive shaft components are provided, including bellows couplings, universal joints, extension couplings, bearings, bearing mounts, ground shaft stock and collars.

Vented mounting screws for the bearing mounts can be found on pages 217–220.

If you require custom designed hardware, please contact our technical sales staff with your inquiries.

Bearing Mounts

Radial Bearing Mounts are made from UHV compatible aluminum and designed for use with 0.250" O.D. precision ground shafts found below.

Linear Bearing Mounts are made from UHV compatible aluminum and designed for use with 0.250" O.D. precision ground shafts found below.

Both radial and linear bearing mounts are supplied with two retaining rings to secure bearings in place.

Bearing Mounts — 250°C / UHV to 1x10⁻¹⁰ Torr

| Installation | Compatible Bearing (Sold Separately) | Qty. | Model Number | Part Number | Unit Price \$ |
|--------------|---|------|--------------|-------------|---------------|
|--------------|---|------|--------------|-------------|---------------|

Radial Bearing Mount

| | | | | | |
|-----------|--------|---|-----------|---------------|----|
| Top Mount | 112004 | 1 | RBM-T-250 | 112002 | 65 |
|-----------|--------|---|-----------|---------------|----|

Linear Bearing Mount

| | | | | | |
|-----------|--------|---|-----------|---------------|----|
| Top Mount | 112005 | 1 | LBM-T-250 | 112003 | 80 |
|-----------|--------|---|-----------|---------------|----|



112002 / Radial Bearing Mount



112003 / Linear Bearing Mount

Bearings

Radial Bearing has a 0.250" I.D. to support precision ground shafts found below. They are stainless steel construction and are dry lubricated with Diconite® which is suitable for UHV environments. Ideally suited for radial bearing mounts listed above.

Linear Bearing has a 0.250" I.D. to support precision ground shafts found below. They are stainless steel construction and are dry lubricated with Diconite® which is suitable for UHV environments. Ideally suited for linear bearing mounts listed above.

Bearings — 250°C / UHV to 1x10⁻¹⁰ Torr

| Bearing Type | Compatible Bearing Mount (Sold Separately) | Qty. | Model Number | Part Number | Unit Price \$ |
|--------------|---|------|--------------|-------------|---------------|
|--------------|---|------|--------------|-------------|---------------|

UHV Bearings

| | | | | | |
|--------|--------|---|----------|---------------|-----|
| Rotary | 112002 | 1 | R-BB-250 | 112004 | 45 |
| Linear | 112003 | 1 | L-BB-250 | 112005 | 125 |



112004 / Rotary Bearing



112005 / Linear Bearing

Precision Ground Shaft Stock

Precision Ground Shaft Stock is ideally suited for use with 0.250" I.D. bearings listed above. These shafts along with our range of couplers on the next page can be used to extend the motion of our rotary and linear feedthroughs found on pages 162 through 169.

Ground Shaft Stock — 250°C / UHV to 1x10⁻¹⁰ Torr

| Length (inches) | Ground OD | Material | Qty. | Model Number | Part Number | Unit Price \$ |
|-----------------|-----------|----------|------|--------------|-------------|---------------|
|-----------------|-----------|----------|------|--------------|-------------|---------------|

Precision Ground Shaft Stock

| | | | | | | |
|----|-------|-----------------|---|--------------|---------------|----|
| 6 | 0.250 | Stainless Steel | 1 | PGSS-250S-6 | 112006 | 15 |
| 12 | 0.250 | Stainless Steel | 1 | PGSS-250S-12 | 112007 | 20 |
| 24 | 0.250 | Stainless Steel | 1 | PGSS-250S-24 | 112008 | 35 |



112006 / Ground Shaft Stock



112009 / Flex Coupling



112010 / Bellows Coupling



112011 / Sleeve Coupling



112012 / Set Screw Collar



112013 / Universal Joint
112014 / Miter and Bevel Gear

Couplers and Collars

Couplers are made from 300 series stainless steel and are ideally suited for UHV applications. Bellows couplings provide 50 oz-in maximum torque at a maximum tilt angle of 5°. Couplings are fitted with two or four 6-32 UNC set screws to lock shafts in position.

Collars are made from 300 series stainless steel and are supplied with one 6-32 UNC set screw to lock shaft in position to create a shaft stop.

Couplers and Collars — 250°C / UHV to 1x10⁻¹⁰ Torr

| Component | ID | OD | Qty. | Model Number | Part Number | Unit Price \$ |
|-----------|----|----|------|--------------|-------------|---------------|
|-----------|----|----|------|--------------|-------------|---------------|

Couplers

| | | | | | | |
|------------------|-------|-------|---|-----------|---------------|-----|
| Flex Coupling | 0.250 | 0.750 | 1 | FLEXC-250 | 112009 | 105 |
| Bellows Coupling | 0.250 | 0.550 | 1 | BELC-250 | 112010 | 210 |
| Sleeve Coupling | 0.250 | 0.500 | 1 | SLVC-250 | 112011 | 30 |

Collar

| | | | | | | |
|------------------|-------|-------|---|--------------|---------------|----|
| Set Screw Collar | 0.250 | 0.500 | 1 | SET-COLL-250 | 112012 | 20 |
|------------------|-------|-------|---|--------------|---------------|----|

Universal Joint / Miter+Bevel Gear

Universal Joints are made from 300 series stainless steel and 6-32 UNC set screws to lock shafts in position. These provide rotary motion input at angles of up to 30° at low speed and 10° at higher speeds while providing variable angle rotary output.

Miter and Bevel Gears provide rotary input and 90° rotary output. These are constructed using 300 series stainless steel bodies as well as 6-32 UNC set screws to lock shafts in position.

Universal Joint / Miter+Bevel Gear — 250°C / UHV to 1x10⁻¹⁰ Torr

| Component | ID | OD | Qty. | Model Number | Part Number | Unit Price \$ |
|-----------|----|----|------|--------------|-------------|---------------|
|-----------|----|----|------|--------------|-------------|---------------|

Universal Joint / Miter+Bevel Gear

| | | | | | | |
|------------------|-------|-------|---|------------|---------------|-----|
| Universal Joint | 0.250 | 0.500 | 1 | UNV-JT-250 | 112013 | 210 |
| Miter+Bevel Gear | 0.250 | 0.650 | 1 | MB-GR-250 | 112014 | 170 |

Precision Ground Shaft Stock

Precision Ground Shaft Stock is ideally suited for use with the 0.125 range of wobble sticks. These shafts can be used to extend the motion and range of our 0.125-inch shaft wobble sticks found on page 167.

Ground Shaft Stock — 250°C / UHV to 1x10⁻¹⁰ Torr

| Length (inches) | Ground OD | Material | Qty. | Model Number | Part Number | Unit Price \$ |
|-----------------|-----------|----------|------|--------------|-------------|---------------|
|-----------------|-----------|----------|------|--------------|-------------|---------------|

Precision Ground Shaft Stock

| | | | | | | |
|---|-------|-----------------|---|-------------|---------------|----|
| 6 | 0.125 | Stainless Steel | 1 | PGSS-125S-6 | 112532 | 20 |
|---|-------|-----------------|---|-------------|---------------|----|



112532 / Stainless Steel Rod

Couplers and Collars

Couplers are made from 300 series stainless steel and are ideally suited for UHV applications. Bellows couplings provide 50 oz-in maximum torque at a maximum tilt angle of 5°. Couplings are fitted with two 6-32 UNC set screws to lock shafts in position.

Collars are made from 300 series stainless steel and are supplied with one 6-32 UNC set screw to lock shaft in position to create a shaft stop.

Couplers and Collars — 250°C / UHV to 1x10⁻¹⁰ Torr

| Component | ID | OD | Qty. | Model Number | Part Number | Unit Price \$ |
|-----------|----|----|------|--------------|-------------|---------------|
|-----------|----|----|------|--------------|-------------|---------------|

Couplers

| | | | | | | |
|------------------|-------|-------|---|----------|---------------|-----|
| Bellows Coupling | 0.125 | 0.550 | 1 | BELC-125 | 112533 | 230 |
| Sleeve Coupling | 0.125 | 0.310 | 1 | SLVC-125 | 112534 | 35 |

Collar

| | | | | | | |
|------------------|-------|-------|---|--------------|---------------|----|
| Set Screw Collar | 0.125 | 0.310 | 1 | SET-COLL-125 | 112535 | 25 |
|------------------|-------|-------|---|--------------|---------------|----|



112533 / Bellows Coupling



112534 / Sleeve Coupling



112535 / Set Screw Collar

Universal Joint / Miter+Bevel Gear

Universal Joints are made from 300 series stainless steel and 2-56 UNC set screws to lock shafts in position. These provide rotary motion input at angles of up to 30° at low speed and 10° at higher speeds while providing variable angle rotary output.

Miter and Bevel Gears provide rotary input and 90° rotary output. These are constructed using 300 series stainless steel bodies as well as 2-56 UNC set screws to lock shafts in position.

Universal Joint / Miter+Bevel Gear — 250°C / UHV to 1x10⁻¹⁰ Torr

| Component | ID | OD | Qty. | Model Number | Part Number | Unit Price \$ |
|-----------|----|----|------|--------------|-------------|---------------|
|-----------|----|----|------|--------------|-------------|---------------|

Universal Joint / Miter+Bevel Gear

| | | | | | | |
|------------------|-------|-------|---|------------|---------------|-----|
| Universal Joint | 0.125 | 0.500 | 1 | UNV-JT-125 | 112536 | 210 |
| Miter+Bevel Gear | 0.125 | 0.385 | 1 | MB-GR-125 | 112537 | 170 |



112536 / Universal Joint
112537 / Miter and Bevel Gear