

# LIVE CENTERS/REVOLVING CENTERS

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LATHE CHUCKS  
LIVE CENTERS

We Offer A Large Selection of Live & Dead Centers For All Applications:  
**CNC Lathe**-High RPM Live and Dead centers for precision turning applications  
**Turning and Grinding**-Live centers for a large variety of maximum workpiece weights  
**Precision Grinding**-High accuracy live centers and a broad selection of Dead centers  
**Large Bore**-Centers for large bore parts, pipe, tubing and other thinner-wall workpieces

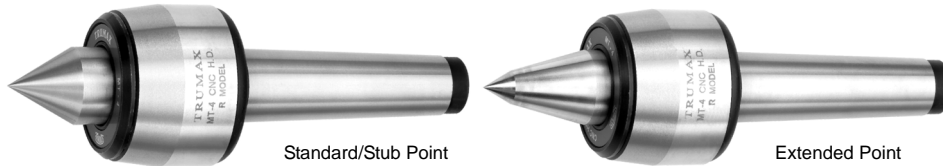
Please Call Us For More Information!



## PRECISION LIVE CENTERS

- Capable of withstanding very high RPM at high loads
- Suitable for CNC and other high speed turning centers
- Bearings made in Germany
- Bearings lubricated for life
- German seals used to bearing from dirt and coolant
- Available in standard/stub point and extended point for clearance

European Quality-Value Priced!



Standard/Stub Point

Extended Point

### STANDARD POINT

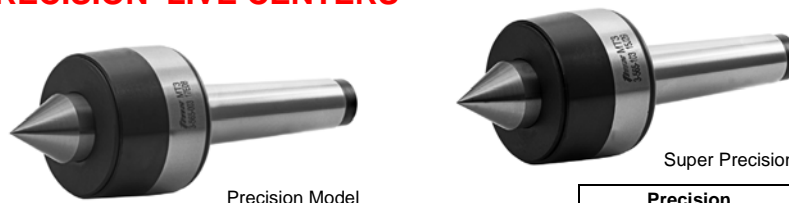
Taper	Description	Proj. Len.	Accuracy	Point Dia	Point Ext.	Body Dia	Body Width	Max RPM	W.P. Weight lbs	Part Number	Price Each
MT 1	Std/Stub Point	2.58	0.0006	0.710	1.02	1.42	1.56	4,000	110	L-M1S-D11H40A-T	\$35.00
MT 2	Std/Stub Point	3.41	0.0006	0.910	1.18	1.81	2.22	3,000	220	L-M2S-D22H30A-T	\$41.25
MT 2	Std/Stub Point Slimline	2.50	0.0003	0.590	0.75	1.34	1.75	7,000	441	L-M2S-D44H70A-T	\$115.00
MT 3	Std/Stub Point	3.66	0.0006	1.100	1.340	2.010	2.32	2,500	550	L-M3S-D55H25A-T	\$52.50
MT 3	Std/Stub Point Heavy Duty	3.72	0.0003	1.100	1.340	2.440	2.38	5,000	1100	L-M3S-H11H50A-T	\$188.95
MT 3	Std/Stub Point Slimline	2.99	0.0003	0.790	1.020	1.650	1.97	5,500	1100	L-M3S-H11H55A-T	\$120.00
MT 4	Std/Stub Point	4.39	0.0006	1.180	1.500	2.440	2.890	2,200	1,320	L-M4S-H13H22A-T	\$60.00
MT 4	Std/Stub Point Heavy Duty	4.01	0.0003	1.260	1.610	2.680	2.400	3,800	1,760	L-M4S-H17H38A-T	\$212.20
MT 4	Std/Stub Point Slimline	3.92	0.0003	0.940	1.260	2.130	2.660	4,750	1,980	L-M4S-H20H47A-T	\$125.00
MT 5	Std/Stub Point	4.72	0.0006	1.340	1.65	2.68	3.07	1,500	1,870	L-M5S-H19H15A-T	\$110.00
MT 5	Std/Stub Point Heavy Duty	5.12	0.0003	1.500	2.01	3.43	3.11	3,000	4,400	L-M5S-H44H30A-T	\$319.75
MT 5	Std/Stub Point Slimline	4.57	0.0006	1.260	1.61	2.68	2.95	3,500	4,400	L-M5S-H44H35A-T	\$225.00
MT 6	Std/Stub Point	5.81	0.0006	1.970	2.20	4.02	3.60	1,000	3,300	L-M6S-H33H10A-T	\$350.00
MT 6	Std/Stub Point Heavy Duty	6.10	0.0006	1.970	2.26	4.02	3.84	2,600	8,360	L-M6S-H83H26A-T	\$410.00

### EXTENDED POINT

Taper	Description	Proj. Len.	Accuracy	Point Dia	Ext. Pt	Point Ext.	Body Dia	Body Width	Max RPM	W.P. Weight lbs	Part Number	Price Each
MT 2	Extended Point Slimline	2.89	0.0003	0.590	0.39	1.14	1.34	1.75	7,000	375	L-M2E-D37H70A-T	\$115.00
MT 3	Extended Point Heavy Duty	4.27	0.0003	1.100	0.470	1.850	2.440	2.38	5,000	880	L-M3E-D88H50A-T	\$188.95
MT 3	Extended Point Slimline	3.46	0.0003	0.790	0.430	1.500	1.650	1.97	5,500	880	L-M3E-D88H55A-T	\$120.00
MT 4	Extended Point Heavy Duty	4.54	0.0003	1.260	0.55	2.240	2.680	2.400	3,800	1,100	L-M4E-H11H38A-T	\$212.20
MT 4	Extended Point Slimline	4.39	0.0003	0.940	0.51	1.730	2.130	2.660	4,750	1,760	L-M4E-H17H47A-T	\$125.00
MT 5	Extended Point Heavy Duty	5.67	0.0003	1.500	0.63	2.56	3.43	3.11	3,000	2,640	L-M5E-H26H30A-T	\$319.75
MT 5	Extended Point Slimline	5.04	0.0006	1.260	0.55	2.09	2.68	2.95	3,500	3,300	L-M5E-H33H35A-T	\$225.00
MT 6	Extended Point Heavy Duty	6.91	0.0006	1.970	0.71	3.07	4.02	3.84	2,600	5,500	L-M6E-H55H26A-T	\$410.00

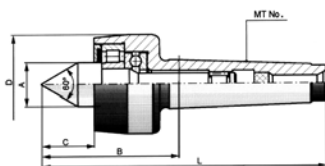
## PRECISION & SUPER PRECISION LIVE CENTERS

- Each center hardened and ground from one single piece of forging
- Spindles are made of high quality alloy steel, heat treated to RC 60-62
- Each Live center provided with 3 heavy duty precision bearings
- Each bearing is specifically protected against dust and coolant



Precision Model

Super Precision



Morse Taper	D	A	L	C	B	Max RPM	Max Wt of Workpiece	Precision TIR 0.0003		Super Precision TIR 0.0001	
								Part Number	Price	Part Number	Price
1	1.50	.59	4.07	.70	1.97	5000	220 lbs	BI-3565-001P	\$103.78	BI-3565-101P	\$114.14
2	1.57	.70	4.74	.87	2.22	5000	460 lbs	BI-3565-002P	\$114.86	BI-3565-102P	\$124.20
3	2.20	.98	6.14	1.12	2.95	4000	925 lbs	BI-3565-003P	\$133.82	BI-3565-103P	\$147.24
4	2.52	1.10	7.24	1.24	3.21	3000	1850 lbs	BI-3565-004P	\$156.93	BI-3565-104P	\$199.33
5	3.35	1.61	9.33	1.77	4.23	2500	4400 lbs	BI-3565-005P	\$255.97	BI-3565-105P	\$281.62
6	5.12	2.48	13.13	2.52	5.96	2000	7700 lbs	BI-3565-006P	\$488.97	BI-3565-106P	\$507.43

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2019-20 MASTER CATALOG

WISE JAWS  
WISE ACCESSORIES

STRAIGHT SHANK  
COLLET HOLDERS

TAP HOLDERS  
DRILL CHUCKS

CARBIDE INSERTS  
THREADING/GROOVING

CUTTING TOOLS  
MACHINERY

PRECISION TOOLS  
DEBURRING

COOLANT/FLUIDS  
TOOL STORAGE

# LIVE CENTERS

## SPINDLE TYPE LIVE CENTERS

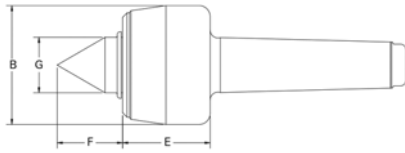
For CNC Lathes-Heavy Duty



**EXCLUSIVE ROYAL  
ROTO-SHIELD™  
TECHNOLOGY**



Standard Point



- +/- 0.00005" TIR guaranteed
- Standard point angle is 60°
- High capacity thrust bearing enables this center to handle extreme axial loads
- Thick, rigid point extends into the shank, supported by a large needle bearing for increased strength and vibration dampening

- Body and point are hardened and ground for strength and durability
- Bearing life is significantly extended with the exclusive Royal Roto-Shield™ coolant slinger and a long-life, spring-loaded seal
- Precision, double-row angular-contact bearing provides high workpiece weight ratings for turning large, heavy parts.

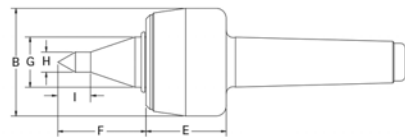
### STANDARD POINT

Taper	B	E	F	G	Max RPM	Weight of WP (lbs)	Thrust Load (lbs)	Part Number	Price Each
2 MT	1.75	1.47	1.01	0.88	6,000	725	2,360	ROY-10102	\$558.60
3 MT	2.33	1.75	1.22	1.00	5,000	970	3,900	ROY-10103	\$558.60
4 MT	2.68	1.98	1.48	1.25	4,500	1,720	4,050	ROY-10104	\$728.14
5 MT	3.45	2.81	1.84	1.50	3,500	3,260	5,700	ROY-10105	\$1,003.52
6 MT	4.00	3.15	2.31	2.00	3,500	4,080	6,000	ROY-10106	\$1,875.72

\* Max. recommended operating limit. Operating above this speed could result in heat build-up and accelerated bearing wear.



CNC Point



### CNC POINT-FOR EXTRA CLEARANCE

Taper	B	E	F	G	H	I	RPM	Weight of WP (lbs)	Thrust Load (lbs)	Part Number	Price Each
2 MT	1.75	1.47	1.35	0.88	0.38	0.63	6,000	375	2,360	ROY-10212	\$588.00
3 MT	2.33	1.75	1.86	1.00	0.38	0.63	5,000	740	3,900	ROY-10213	\$588.00
4 MT	2.68	1.98	2.18	1.25	0.50	0.81	4,500	1,120	4,050	ROY-10214	\$738.92
5 MT	3.45	2.81	2.58	1.50	0.50	0.81	3,500	1,930	5,700	ROY-10215	\$1,003.52
6 MT	4.00	3.15	3.00	2.00	0.75	1.28	3,500	2,420	6,000	ROY-10216	\$1,938.44

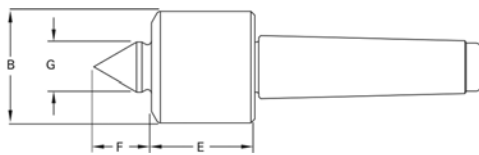
## VALUE-TURN® LIVE CENTERS

For Manual & CNC Lathes



- +/- 0.00005" TIR guaranteed
- Standard point angle is 60°
- Rotating point is hardened for wear resistance
- Sturdy, low cost, American made center for light/medium-duty work

- Two precision radial bearings allow for high operating speeds
- Sealed rear bearing protects assembly from chips and coolant



Taper	B	E	F	G	Max RPM	Weight of WP (lbs)	Thrust Load (lbs)	Part Number	Price Each
1 MT	1.68	1.56	0.88	0.75	5,000	390	3,730	ROY-10851	\$278.32
2 MT	1.68	1.56	0.88	0.75	5,000	390	3,730	ROY-10852	\$257.74
3 MT	1.68	1.56	0.88	0.75	5,000	390	3,730	ROY-10853	\$277.34
4 MT	2.45	2.03	1.20	1.13	4,500	750	4,990	ROY-10854	\$336.14
5 MT	2.45	2.03	1.20	1.13	4,500	750	4,990	ROY-10855	\$377.30

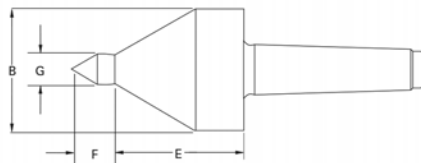
## VERSA-TURN LIVE CENTERS

Multi-Purpose Live Center



- +/- 0.00005" TIR guaranteed
- Standard point angle is 60°
- Extended front section of point provides excellent tool clearance
- Rear bull-head section ideal for tubes and parts with large holes

- Two precision radial bearings allow for high operating speeds
- Close-fitting head eliminates contact seal, resulting in an extremely free turning center
- Great for thin parts



Taper	B	E	F	G	Max RPM	Weight of WP (lbs)	Thrust Load (lbs)	Part Number	Price Each
2 MT	2.13	2.22	0.74	0.50	5,000	330	2,160	ROY-10831	\$423.36
3 MT	2.13	2.22	0.74	0.50	5,000	330	2,160	ROY-10832	\$418.46
3 MT HD	2.50	2.60	0.93	0.63	4,000	685	5,000	ROY-10833	\$472.36
4 MT	2.50	2.60	0.93	0.63	4,000	685	5,000	ROY-10834	\$486.08
4 MT HD	3.38	3.15	1.12	0.75	3,500	1,165	5,700	ROY-10835	\$660.52
5 MT	3.38	3.15	1.12	0.75	3,500	1,165	5,700	ROY-10836	\$694.82

Call Us Today For All Of Your Machine Tool Needs!

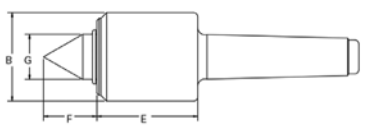


## HIGH-PRECISION QUAD-BEARING LIVE CENTERS

For CNC & Manual Lathes



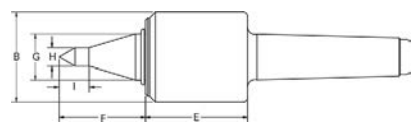
Standard Point



**EXCLUSIVE ROYAL ROTO-SHIELD™ TECHNOLOGY**



CNC Point



- +/- 0.00005" TIR guaranteed
- Standard point angle is 60°
- Three precision angular-contact bearings are secured to the point with a locknut to form a rigid, preloaded assembly
- Point extends into body and supported by needle roller bearing for increased rigidity and vibration dampening

- Body and point are hardened and ground for strength and durability
- Bearing life is significantly extended with the exclusive Royal Roto-Shield™ coolant slinger and a long-life, spring-loaded seal
- Precision bearing assembly provides exception rigidity and accuracy

### STANDARD POINT

Taper	B	E	F	G	Max RPM	Weight of WP (lbs)	Thrust Load (lbs)	Part Number	Price Each
2 MT	1.70	2.12	1.07	0.88	6,000	885	1,270	ROY-10412	\$604.66
3 MT	1.70	2.12	1.07	0.88	6,000	885	1,270	ROY-10413	\$624.26
4 MT	2.45	2.78	1.47	1.25	5,000	2,240	2,150	ROY-10414	\$778.12
5 MT	2.45	2.78	1.47	1.25	5,000	2,240	2,150	ROY-10415	\$820.26
5 MT HD	3.82	3.89	2.31	2.00	3,000	5,240	5,300	ROY-10445	\$1,645.42
6 MT HD	3.82	3.89	2.31	2.00	3,000	5,240	5,300	ROY-10446	\$2,022.72

### CNC POINT-FOR EXTRA CLEARANCE

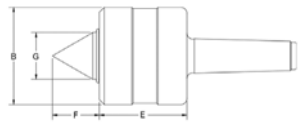
Taper	B	E	F	G	H	I	Max RPM	Weight of WP (lbs)	Thrust Load (lbs)	Part Number	Price Each
2 MT	1.70	2.12	1.75	0.88	0.38	0.63	6,000	465	1,270	ROY-10662	\$604.66
3 MT	1.70	2.12	1.75	0.88	0.38	0.63	6,000	465	1,270	ROY-10663	\$624.26
4 MT	2.45	2.78	2.35	1.25	0.50	0.81	5,000	1,230	2,150	ROY-10664	\$778.12
5 MT	2.45	2.78	2.35	1.25	0.50	0.81	5,000	1,230	2,150	ROY-10665	\$820.26
5 MT HD	3.82	3.89	3.34	2.00	0.75	1.28	3,000	2,210	5,300	ROY-10475	\$1,645.42
6 MT HD	3.82	3.89	3.34	2.00	0.75	1.28	3,000	2,210	5,300	ROY-10476	\$2,022.72

## SUPER-QUAD EXTRA HEAVY-DUTY LIVE CENTERS

For Very Heavy Parts



**EXCLUSIVE ROYAL ROTO-SHIELD™ TECHNOLOGY**



- +/- 0.00005" TIR guaranteed
- Standard point angle is 60°
- Sturdy, heavy duty point extends into shank for increased rigidity
- Three precision angular-contact bearings are secured to the point with a locknut to form a rigid, preloaded assembly

Taper	B	E	F	G	Max RPM	Weight of WP (lbs)	Thrust Load (lbs)	Part Number	Price Each
4 MT	3.70	3.31	1.77	1.63	4,000	3,325	4800	ROY-10364	\$2,141.30
5 MT	4.94	4.45	2.39	2.38	3,000	10,650	13220	ROY-10365	\$3,003.70
6 MT	4.94	4.33	2.39	2.38	3,000	10,650	13,220	ROY-10368	\$3,192.84

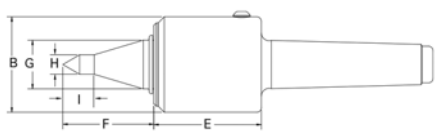


## HIGH-SPEED PRECISION LIVE CENTERS

With Steel Point



**EXCLUSIVE ROYAL ROTO-SHIELD™ TECHNOLOGY**



- +/- 0.00005" TIR guaranteed
- Standard point angle is 60°
- A true high-speed Live center: up to 12,000 RPM
- Low-profile head and extended point provide exceptional tool clearance
- Lubricated with spindle oil instead of grease for reduced turning resistance and lower operating temperatures
- Three precision angular-contact bearings are secured to the point with a locknut to form a rigid, preloaded assembly

- Point extends into body and supported by needle roller bearing for increased rigidity and vibration dampening
- Body and point are hardened and ground for strength and durability
- Bearing life is significantly extended with the exclusive Royal Roto-Shield™ coolant slinger and a long-life, spring-loaded seal
- Precision bearing assembly provides exception rigidity and accuracy

Taper	B	E	F	G	H	I	Max RPM	Weight of WP (lbs)	Thrust Load (lbs)	Part Number	Price Each
2 MT	1.70	2.12	1.75	0.88	0.38	0.63	12,000	180	650	ROY-10682	\$832.02
3 MT	1.70	2.12	1.75	0.88	0.38	0.63	12,000	180	650	ROY-10683	\$863.38
4 MT	2.45	2.78	2.35	1.25	0.50	0.81	12,000	525	1,380	ROY-10684	\$1,028.02
5 MT	2.45	2.78	2.35	1.25	0.50	0.81	12,000	525	1,380	ROY-10685	\$1,070.16



### ROTO-SHIELD™ TECHNOLOGY-ONLY AVAILABLE ON ROYAL LIVE CENTERS!

Royal Roto-Shield™ represents a breakthrough in Live center technology, significantly increasing operating life!

- A Live center point machined from a solid bar which incorporates a specially-shaped steel coolant slinger
- A long-life, spring-loaded seal that is resistant to abrasion, high temperatures and virtually all metalworking fluids
- Coolant is deflected, keeping it from penetrating the center
- Bearings are protected from harmful fines and dust
- Lubricating grease lasts longer and retains consistency
- Seal wear is minimized

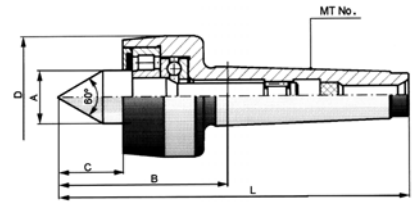


Call Us Or Visit Our Website For Our Complete Selection!

# LIVE & DEAD CENTERS

## PRECISION & SUPER PRECISION LIVE CENTERS

- Machined from one piece of forging, hardened and precisely ground
- Three precision high-quality bearings are protected by a special steel shield and neoprene seal
- Live centers are lubricated with a special grease and do not require any additional lubrication



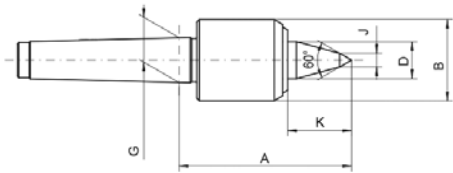
Morse Taper	D	A	L	C	B	Max RPM	Max Wt of Workpiece	Precision			Super Precision		
								TIR	Part Number	Price	TIR	Part Number	Price
1	1.50	.59	4.07	.70	1.97	5000	220 lbs	0.0003	BI-7565-001	\$103.50	0.0002	BI-7565-101	\$113.40
2	1.57	.70	4.74	.87	2.22	5000	460 lbs	0.0003	BI-7565-002	\$117.90	0.0001	BI-7565-102	\$126.90
3	2.20	.98	6.14	1.12	2.95	4000	925 lbs	0.0003	BI-7565-003	\$142.20	0.0001	BI-7565-103	\$145.80
4	2.52	1.10	7.24	1.24	3.21	3000	1850 lbs	0.0003	BI-7565-004	\$160.20	0.0001	BI-7565-104	\$203.40
5	3.35	1.61	9.33	1.77	4.23	2500	4400 lbs	0.0004	BI-7565-005	\$253.80	0.0002	BI-7565-105	\$288.00
6	5.12	2.48	13.13	2.52	5.96	2000	7700 lbs	0.0004	BI-7565-006	\$484.20	0.0002	BI-7565-106	\$503.10



## HEAVY DUTY PRECISION LIVE CENTERS

### Slim Body

- Bison Type 8813R
- Extended 60° point
- Small body diameter
- Machined from one piece of forging, hardened and precisely ground
- Provided with three selected heavy-duty ultra precision bearings
- Bearings are protected against dust and coolant

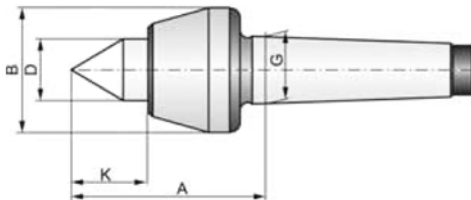


Morse Taper	Max. Wt. Workpiece	Max RPM	A	B	D	G	K	J	Accuracy TIR	Part Number	Price Each
2	374 lbs	7,000	2.87	1.26	0.59	0.70	1.14	0.39	0.0003	BI-7562-002	\$126.90
3	748 lbs	7,000	2.91	1.34	0.59	0.94	1.18	0.43	0.0003	BI-7562-003	\$144.90
4	1540 lbs	6,300	3.48	1.65	0.79	1.23	1.50	0.51	0.0003	BI-7562-004	\$202.50
5	3080 lbs	4,300	4.69	2.28	1.18	1.75	1.93	0.55	0.0004	BI-7562-005	\$286.20
6	6600 lbs	3,000	6.46	3.15	1.65	2.49	2.76	0.71	0.0008	BI-7562-006	\$487.80

## HEAVY DUTY SUPER PRECISION LIVE CENTERS

### 0.0002" TIR

- Bison Type 8811R
- Machined from one piece of forging, hardened and precisely ground
- Provided with three selected heavy-duty ultra precision bearings
- Bearings are protected against dust and coolant

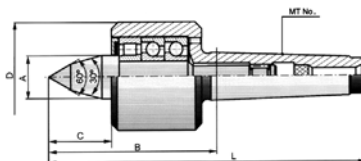


Morse Taper	Max. Wt. Of Workpiece	Max RPM	A	B	D	G	K	Part Number	Price Each
1	220	7000	2.382	1.417	0.591	0.475	0.670	BI-7568-001	\$139.50
2	441	7000	2.539	1.772	0.787	0.700	0.925	BI-7568-002	\$106.20
3	1102	5000	3.110	2.362	0.984	0.938	1.201	BI-7568-003	\$133.20
4	1764	3800	3.996	2.756	1.260	1.231	1.575	BI-7568-004	\$225.00
5	4409	3000	5.039	3.543	1.575	1.748	1.929	BI-7568-005	\$282.60

## NC QUAD-BEARING LIVE CENTERS

### 0.0002" TIR

- Heavy duty, quad-bearing
- High speed-7000 to 6000 RPM
- Type 8814NC



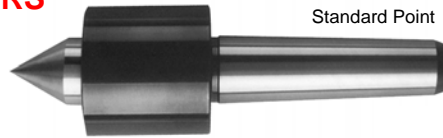
Morse Taper	Max. Wt. Of Workpiece	Max RPM	A	B	C	D	L	Part Number	Price Each
4	2200	7000	1.10	4.58	1.91	2.76	8.62	BI-7566-004	\$259.20
5	4400	6000	1.57	5.87	2.64	3.47	11.0	BI-7566-005	\$404.10

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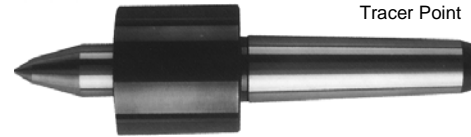


## ECONO TRI-BEARING LIVE CENTERS

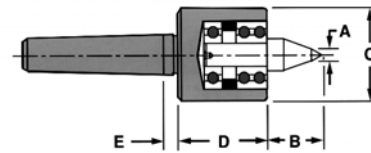
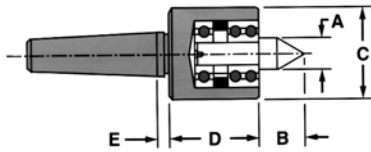
- Accuracy guaranteed to +/- .0002
- Three rows of bearings
- Points through-hardened to 61-63 Rc
- Sealed bearings lubricated for life, protected from contaminants and coolant
- Made in the USA



Standard Point



Tracer Point



### Morse Taper - Standard Point

Morse Taper	A	B	C	D	E	Max RPM	W.P. Weight	Part Number	Price Each
2	9/16	13/16	15/8	1-5/8	1/4	2500	300	RI-44102	\$171.00
3	13/16	1	2	1-15/16	1/4	2500	500	RI-44103	\$176.70
4	1	1-1/4	2-3/8	2-1/4	1/4	2500	1100	RI-44104	\$235.60
5	1	1-1/4	2-3/8	2-1/4	1/4	2500	1100	RI-44105	\$319.20

### Morse Taper - Tracer Point

Morse Taper	A	B	C	D	E	Max RPM	W.P. Weight	Part Number	Price Each
2	3/8	1-1/4	1-5/8	1-5/8	1/4	2500	300	RI-44902	\$171.00
3	3/8	1-1/2	2	1-15/16	1/4	2500	300	RI-44903	\$176.70
4	1/2	2	2-3/8	2-1/4	1/4	2500	900	RI-44904	\$235.60
5	1/2	2	2-3/8	2-1/4	1/4	2500	900	RI-44905	\$319.20

## REGAL LIVE CENTERS

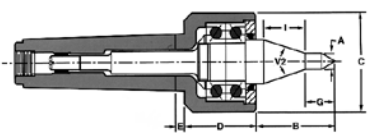
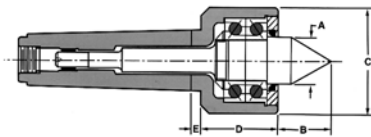
- Accuracy guaranteed to +/- .00005
- Two angular contact bearings for superior performance
- Points through-hardened to 61-63 Rc
- Full length spindle for extra rigidity
- Body heat-treated for additional strength
- Made in the USA



Standard Point



Long Point



### Morse Taper - Standard Point

Morse Taper	A	B	C	D	E	Max RPM	W.P. Weight	Part Number	Price Each
2	1	1-1/4	2-3/8	1-3/4	1/4	4000	440	RI-48602	\$258.40
3	1	1-1/4	2-3/8	1-3/4	1/4	4000	1100	RI-48603	\$296.40
4	1-3/8	1-1/2	3	1-31/32	3/8	4000	2100	RI-48604	\$385.70
5	1-3/8	1-13/16	3-1/16	2-9/32	9/32	5000	2800	RI-48605	\$530.10

### Morse Taper-Long Point

Morse Taper	A	B	C	D	E	G	V2	I	Max RPM	W.P. Weight	Part Number	Price Each
2	3/8	1-7/8	2-3/8	13/4	1/4	5/8	34°	1-21/32	4000	310	RI-48102	\$258.40
3	3/8	1-7/8	2-3/8	13/4	1/4	5/8	34°	1-21/32	4000	640	RI-48103	\$296.40
4	1/2	2-7/32	3	1-31/32	3/8	13/16	34°	2	4000	1100	RI-48104	\$385.70
5	1/2	2-1/2	3-1/16	2-9/32	9/32	15/16	44°	2	5000	1100	RI-48105	\$530.10

## ADVANTAGE LIVE CENTERS

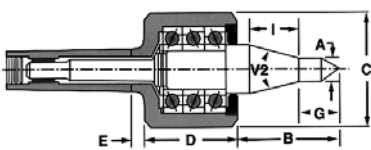
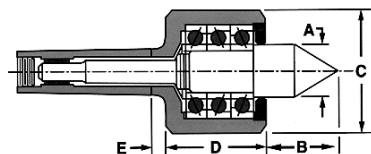
- Accuracy guaranteed to +/- .00005
- Four bearing design for superior performance
- Points through-hardened to 61-63 Rc
- Full length spindle for extra rigidity
- Also available in Tracer Point
- Made in the USA



Standard Point



Long Point



### Morse Taper - Standard Point

Morse Taper	A	B	C	D	E	Max RPM	W.P. Weight	Part Number	Price Each
2	7/8	1-1/8	1-3/4	2-5/8	3/8	5000	880	RI-51602	\$399.00
3	7/8	1-1/8	1-3/4	2-5/8	3/8	5000	920	RI-51603	\$410.40
4	1-1/8	2	2-7/8	3-3/16	1/2	4200	2200	RI-51604	\$511.10
5	1-1/8	2	2-7/8	3-3/16	1/2	4200	4400	RI-51605	\$562.00
6	1-7/8	2-1/4	3-3/4	3-27/32	1/2	4000	14000	RI-51606	\$1,322.40

### Morse Taper - Long Point

Morse Taper	A	B	C	D	E	G	V2	I	Max RPM	W.P. Weight	Part Number	Price Each
2	3/8	2	1-3/4	2-5/8	3/8	3/4	30°	1-11/16	5000	310	RI-51102	\$399.00
3	3/8	2	1-3/4	2-5/8	3/8	3/4	30°	1-11/16	5000	310	RI-51103	\$410.40
4	1/2	2-1/2	2-7/8	3-3/16	1/2	15/16	30°	2-1/16	4200	1100	RI-51104	\$511.10
5	1/2	2-1/2	2-7/8	3-3/16	1/2	15/16	30°	2-1/16	4200	1100	RI-51105	\$562.00

Call Us Or Visit Our Website For Our Complete Selection!

# LIVE CENTERS



## HEAVY DUTY LIVE CENTERS

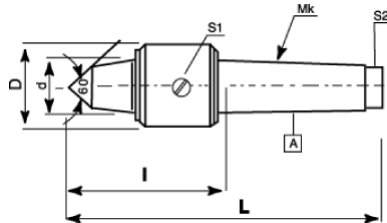
- 60° standard point angle
- The rotating spindle is extended right through the tapered shank
- Two specially designed adjustable needle-roller bearings carry all radial loads
- Heavy duty ball thrust bearing takes all axial thrust
- Complete protection of bearings from coolant, dirt or swarf



Morse Taper	Point Dia	Body Dia	Body Length	Weight of WP (lbs)	Part Number	Price Each
1	5/8	1-3/8	4-3/8	200	SK-310-105	\$102.60
2	7/8	1-1/2	5	600	SK-310-110	\$153.00
3	1-1/8	1-7/8	6-1/4	900	SK-310-115	\$191.30
4	1-1/2	2-3/16	7-1/2	1800	SK-310-120	\$242.50
5	1-3/4	2-3/4	9-1/2	3000	SK-310-125	\$335.90
6	2-3/8	3-1/2	12-3/4	7500	SK-310-130	\$582.20

## PRECISION CNC LIVE CENTERS

- Designed for NC lathes.
- Face parts are formed to allow easy access of the tool to the workpiece
- Special ring sets the radial clearance of the center and prevents cutting lubricant from leaking into the center bearing space
- Spindle-like point extends into shank where it is supported by a needle bearing, increasing rigidity, reducing point deflection and dampening vibration

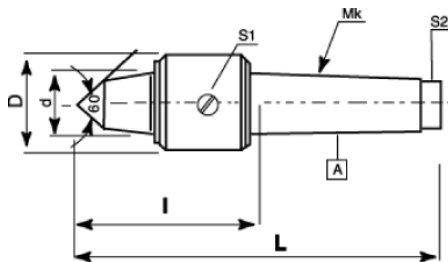
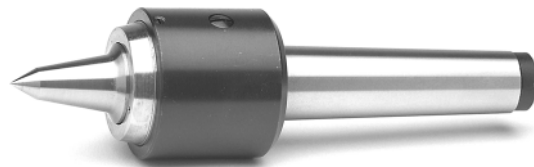


Morse Taper	D	d	L	I	Load (lbs)	Part Number	Price Each
2	1.50	0.695	5.25	2.65	1300	SK-310-010	\$304.50
3	1.85	0.750	6.75	3.50	1550	SK-310-015	\$322.90
4	2.20	1.125	8.15	3.95	4840	SK-310-020	\$376.40
5	3.10	1.375	10.50	4.85	7750	SK-310-025	\$473.60



## EXTENDED POINT LIVE CENTERS

- Designed to keep dust, chips and coolant from coming inside the bearings
- Hardened and ground to 61-65 Rockwell
- Concentricity within .0002"

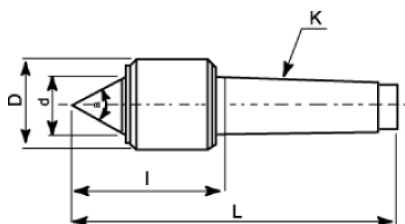
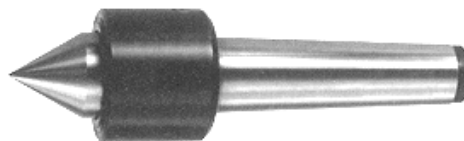


Morse Taper	D	d	L	I	Load Kg	Part Number	Price Each
2	1.417	0.866	5.059	2.560	594	SK-310-160	\$168.40
3	1.850	1.181	6.575	3.386	704	SK-310-165	\$199.70
4	2.165	1.378	8.169	4.094	2200	SK-310-170	\$251.00
5	2.736	1.772	10.197	5.078	3960	SK-310-175	\$346.60
6	3.504	2.362	13.425	6.316	12600	SK-310-180	\$610.50



## EXTRA HEAVY DUTY LIVE CENTERS

- 60° standard point angle
- The rigid structure and seating of the turning part is characterized by long service life
- The model is commonly used for work at grinding machines
- The Live centers are provided with shanks according to DIN 228 and ISO 296 (without clamping thread)



Morse Taper	D	d	I	L	Load (lbs)	Part Number	Price Each
4	2.15	1.20	4.10	7.85	3300	SK-310-920	\$1,104.00
5	2.40	1.70	5.60	9.48	5500	SK-310-925	\$1,361.80
6	4.92	2.16	6.42	13.38	11000	SK-310-930	\$2,576.40
7	5.70	2.56	7.80	15.25	17600	SK-310-935	\$4,479.60



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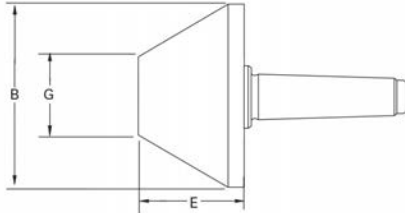
# BULL HEAD LIVE CENTERS

TABLE OF CONTENTS

## BULL HEAD LIVE CENTERS

For Pipes, Tubes & Parts With Large Center Holes

- Accuracy: +/-0.00005" TIR
- Head angle ground to 60°
- Head OD is 1/8" larger than nominal size to cover a wider range of workpieces
- Body and head are hardened for strength and durability
- Two matched angular contact bearings provide good thrust and radial load ratings
- Steel shield and neoprene seal protect bearing assembly from coolant and chips

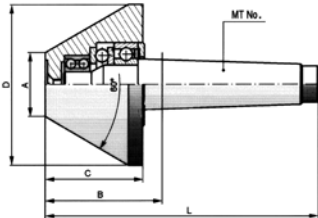


Taper	B	E	G	Max RPM	Weight of WP (lbs)	Thrust Load (lbs)	Part Number	Price Each
3 MT	3.15	2.52	1.00	5,000	615	1,780	ROY-10902	\$788.90
4 MT	4.15	3.01	1.25	4,500	860	2,550	ROY-10904	\$978.04
5 MT	4.15	3.01	1.25	4,500	860	2,550	ROY-10905	\$978.04
5 MT	5.15	3.17	2.00	4,000	1,145	3,450	ROY-10907	\$1,219.12
5 MT	6.15	3.60	2.50	3,500	1,450	4,500	ROY-10909	\$1,684.62

## BULL HEAD LIVE CENTERS



- Triple bearing design
- Three matched bearings are preloaded at the factory
- Good thrust and radial capabilities
- Bearings are protected by a special seal
- Head is made of alloy steel and heat treated to RC 61-63
- 60° head angle
- Designed to hold pipe and hollow work

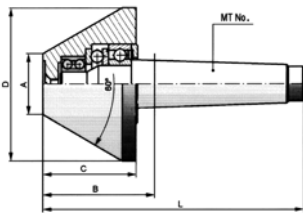


Morse Taper	TIR	D	A	B	C	L	Max Wt Of Workpiece	Max RPM	Part Number	Price Each
2	.0003	2.36	1.18	1.60	1.38	4.11	400	5000	BI-7575-020	\$109.80
2	.0003	3.15	1.18	2.32	2.09	4.84	660	4500	BI-7575-021	\$168.30
3	.0003	3.15	1.18	2.32	2.09	5.51	770	4500	BI-7575-030	\$171.00
3	.0003	3.93	1.57	2.64	2.40	5.83	1210	3000	BI-7575-031	\$241.20
4	.0003	3.93	1.57	2.70	2.40	6.73	1320	3000	BI-7575-040	\$238.50
4	.0004	5.51	2.76	3.05	2.76	7.09	1540	3000	BI-7575-042	\$266.40
5	.0008	6.69	3.94	3.05	2.76	8.15	1653	2000	BI-7575-051	\$333.00
6	0.002	11.50	7.09	4.57	4.21	11.73	4400	1000	BI-7575-060	\$1,306.80

## BULL HEAD LIVE CENTERS



- Designed to hold pipe and hollow work
- Triple bearing design
- Includes three preloaded matched bearings
- Bearings are protected by a special seal
- Head is made of alloy steel and heat treated to RC 61-63
- Good thrust and radial capabilities
- 60° head angle



Morse Taper	TIR	D	A	B	C	L	Max Wt Of Workpiece	Max RPM	Part Number	Price Each
1	.0003	1.97	.79	1.56	1.38	3.66	220	5000	BI-3575-010P	\$98.46
2	.0003	2.30	1.18	1.60	1.38	4.11	400	5000	BI-3575-020P	\$115.83
2	.0003	3.15	1.18	2.32	2.09	4.84	660	4500	BI-3575-021P	\$178.47
3	.0003	3.15	1.18	2.32	2.09	5.51	770	4500	BI-3575-030P	\$181.26
3	.0003	3.98	1.57	2.64	2.40	5.83	1210	3000	BI-3575-031P	\$255.24
4	.0003	3.98	1.57	2.70	2.40	6.73	1320	3000	BI-3575-040P	\$244.98
4	.0004	5.51	2.76	3.05	2.76	7.09	1540	3000	BI-3575-042P	\$281.97
5	.0008	6.61	3.94	3.05	2.76	8.15	1653	2000	BI-3575-051P	\$352.80



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**99**

LATHE CHUCKS  
LIVE CENTERS

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CARBIDE INSERTS  
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CUTTING TOOLS  
MACHINERY

PRECISION TOOLS  
DEBURRING

COOLANT/FLUIDS  
TOOL STORAGE

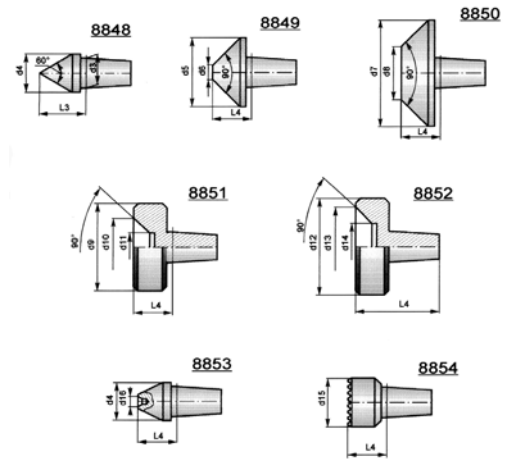
# LIVE CENTERS SETS

## LIVE CENTERS WITH INTERCHANGEABLE INSERTS



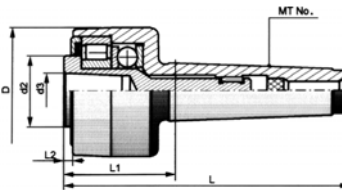
**7 Centers In 1!**

- Body of Live centers and inserts are made of forgings, hardened and precisely ground
- Sets are provided with the main body and seven different style inserts in a wooden case
- Precision high quality bearings
- Special sealing ring protects the bearings from coolant and dust
- Inserts are easily interchangeable



Live Center Body Dimensions

MT	L	L1	L2	D	d2	d3
2	4.055	1.54	.177	1.57	.71	.28
3	5.217	2.03	.197	2.20	.98	.47
4	6.220	2.19	.217	2.52	1.10	.59
5	7.815	2.72	.256	3.35	1.61	.87
6	10.846	3.70	.256	5.12	2.48	1.89



Morse Taper	Max RPM	Max. Wt. Of Workpiece	Part Number	Set Price
2	5000	220	BI-7570-002	\$362.70
3	4000	440	BI-7570-003	\$405.90
4	3000	880	BI-7570-004	\$536.40
5	2500	1770	BI-7570-005	\$707.40
6	2000	3550	BI-7570-006	\$1,147.50

Interchangeable Insert Dimensions (see diagram above right)

MT	8848			8849			8850				8851				8852				8853				8854	
	L3	d3	d4	L4	d5	d6	L4	d7	d8	L4	d9	d10	d11	L4	d12	d13	d14	L4	d16	d4	L4	d15		
2	.75	.28	.59	.51	.87	.12	.51	1.50	.71	.51	.87	.71	.31	.51	1.18	.98	.59	.51	.049	.59	.51	.71		
3	.98	.47	.79	.79	1.42	.24	.79	2.48	1.30	.79	1.42	1.10	.47	.79	1.77	1.50	.87	.79	.049	.79	.79	.98		
4	1.18	.79	.98	.91	1.77	.39	.91	2.76	1.38	.91	1.77	1.46	.67	.91	2.48	2.09	1.18	-	-	-	.91	1.26		
5	1.46	.87	1.26	1.10	2.20	.55	1.10	3.15	1.50	1.10	2.20	1.73	.79	-	-	-	-	1.10	.098	1.26	1.10	1.77		
6	1.73	1.89	1.42	1.34	2.76	.70	1.34	3.94	1.97	1.34	2.76	2.28	.94	1.34	3.94	3.46	2.13	1.34	.157	1.42	1.34	2.20		

## TOOLMAKER'S LIVE CENTER SET

- Royal Toolmaker's Set Includes: changeable-point Live center, all five point styles and one additional #3 standard 60° male point.
- Wooden case provides a convenient way to store and protect the center and points when not in use.
- All points in the set are ground and serialized to the same live center.



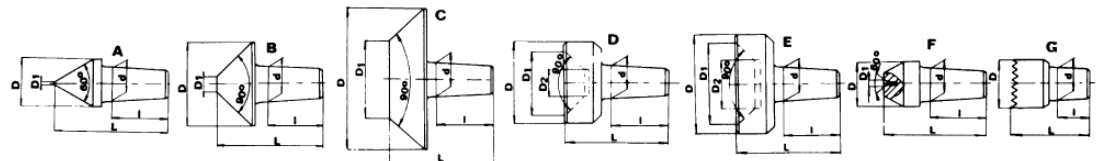
Taper	Part Number	Set Price
MT2	ROY-10306	\$1,522.92
MT3	ROY-10307	\$1,596.42
MT4	ROY-10308	\$2,191.28
MT5	ROY-10309	\$2,260.86

## LIVE CENTER SETS



- Rotating spindle is extended right through the tapered shank.
- Two specially designed adjustable needle-roller bearings carry all radial loads.
- Heavy duty ball thrust bearing takes all axial thrust.
- Built-in oil seal protects bearings from coolant and dirt and also prevents loss of lubricant.

Morse Taper	Reference Number	Part Number	Price
MT3	243326	SK-310-705	\$679.23
MT4	243326	SK-310-710	\$802.91
MT5	243326	SK-310-715	\$1,173.25
MT6	243326	SK-310-720	\$1,690.50



Morse Taper	d	I	A	B-G		A		B		C			D		E		F		G
				L	D	D1	D	D1	D	D1	D	D1	D2	D	D1	D2	D	D1	D
3	.590	.984	1.968	1.771	.787	.019	1.417	.236	2.480	1.299	1.417	1.102	.472	1.771	1.496	.866	.787	.098	.984
4	.784	1.181	2.362	2.086	.984	.019	1.771	.393	2.755	1.378	1.771	1.456	.669	2.480	2.086	1.181	.984	.196	1.259
5	.984	1.496	2.874	2.559	1.259	.039	2.204	.551	3.149	1.496	2.204	1.732	.787	2.775	2.362	1.417	1.259	.196	1.771
6	1.181	1.811	3.543	3.149	1.417	.039	2.755	.708	3.937	1.968	2.755	2.283	.950	3.937	3.464	2.126	1.417	.315	2.204



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## DEAD CENTERS Steel and Carbide Point

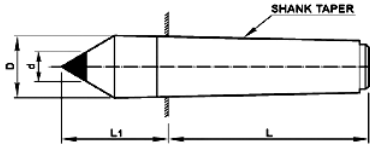


European Quality At A Value Price!

F



- Available with plain steel or carbide tip
- Crafted from bearing steel EN-31
- Hardened to 60 HRC.
- Precision Ground. Point run out within 0.015mm max

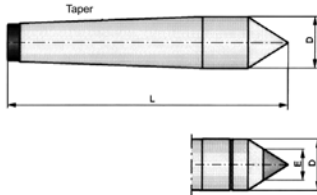


Point Type	Morse Taper	L	L1	D	d	Part Number	Price Each
Plain	MT1	2.11	1.04	0.48	-	D-M1S-05-10NA-T	\$16.00
	MT2	2.52	1.42	0.71	-	D-M2S-07-14NA-T	\$21.00
	MT3	3.19	1.73	0.95	-	D-M3S-09-17NA-T	\$31.00
	MT4	4.04	2.26	1.24	-	D-M4S-12-23NA-T	\$41.00
	MT5	5.10	2.78	1.76	-	D-M5S-17-28NA-T	\$51.00
	MT6	7.17	3.46	2.51	-	D-M6S-25-35NA-T	\$81.00
Carbide	MT1	2.11	1.04	0.48	0.20	D-M1S-02-10NC-T	\$21.00
	MT2	2.52	1.42	0.71	0.31	D-M2S-03-14NC-T	\$28.00
	MT3	3.19	1.73	0.95	0.43	D-M3S-04-17NC-T	\$35.00
	MT4	4.04	2.26	1.24	0.55	D-M4S-05-23NC-T	\$53.00
	MT5	5.10	2.78	1.76	0.71	D-M5S-07-28NC-T	\$71.00
	MT6	7.17	3.46	2.51	0.71	D-M6S-07-35NC-T	\$153.00

## FULL DEAD CENTERS

### Steel & Carbide Tipped

- Accuracy: +/-0.0001" TIR
- Designed for use wherever high accuracy is required
- Case hardened to 61-63 HRC
- Carbide tipped offers longer tool life and requires less re-grinding



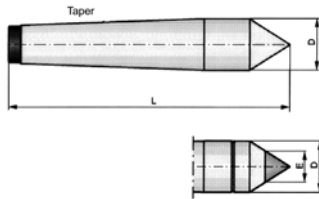
B

Taper	L	D	Steel Point Type 8712		E	Carbide Tipped Type 8711	
			Part Number	Price		Part Number	Price
1MT	3.15	0.48	BI-7555-005	\$13.50	0.28	BI-7550-005	\$28.80
2MT	3.94	0.71	BI-7555-010	\$16.20	0.28	BI-7550-010	\$28.80
3MT	4.92	0.95	BI-7555-015	\$20.70	0.43	BI-7550-015	\$42.30
4MT	6.30	1.24	BI-7555-020	\$32.40	0.55	BI-7550-020	\$61.20
5MT	7.87	1.76	BI-7555-025	\$58.50	0.71	BI-7550-025	\$83.70

## FULL DEAD CENTERS

### Steel & Carbide Tipped

- Accuracy: +/-0.0002" TIR
- Case hardened to 61-63 HRC



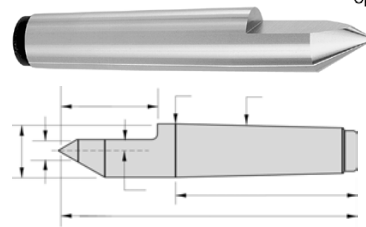
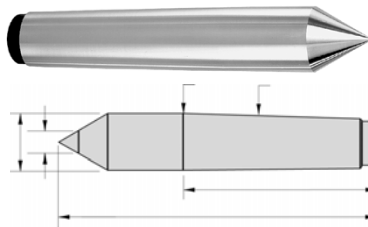
B

Taper	L	D	Steel Point		E	Carbide Tipped	
			Part Number	Price		Part Number	Price
1MT	3.15	0.48	BI-3555-005P	\$13.86	0.28	BI-3550-005P	\$29.79
2MT	3.94	0.71	BI-3555-010P	\$16.47	0.28	BI-3550-010P	\$28.44
3MT	4.92	0.95	BI-3555-015P	\$21.87	0.43	BI-3550-015P	\$44.82
4MT	6.30	1.24	BI-3555-020P	\$34.02	0.55	BI-3550-020P	\$64.17
5MT	7.87	1.76	BI-3555-025P	\$61.74	0.71	BI-3550-025P	\$86.13

## DEAD CENTERS

### Steel and Carbide Point

- Accuracy: +/-0.00005" TIR
- Ground to an angle of 60°
- Used for grinding but can be used in high-precision turning applications
- Solid dead centers are made from ball bearing steel and are hardened to Rc 61-63
- Carbide-tipped feature carbide blank brazed into a close-tolerance socket for maximum strength and rigidity



A

Taper	B	C	D	E	F	G	H	Steel Point		Carbide Tipped		1/2 Center-Carbide Tipped	
								Part Number	Price	Part Number	Price	Part Number	Price
2MT	4-3/16"	2-9/16"	.700"	.700"	3/8"	3/16"	1-3/8"	ROY-11011	\$109.76	ROY-11012	\$145.04	ROY-11014	\$170.52
3MT	5-1/4"	3-3/16"	.938"	.938"	1/2"	7/32"	1-11/16"	ROY-11021	\$170.52	ROY-11022	\$197.96	ROY-11024	\$223.44
4MT	6-3/4"	4-1/16"	1.231"	1.231"	1/2"	1/4"	2-1/4"	ROY-11031	\$244.02	ROY-11032	\$259.70	ROY-11034	\$285.18
5MT	8-1/2"	5-3/16"	1.748"	1.748"	5/8"	3/8"	2-3/4"	ROY-11041	\$365.54	ROY-11042	\$402.78	ROY-11044	\$424.34

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