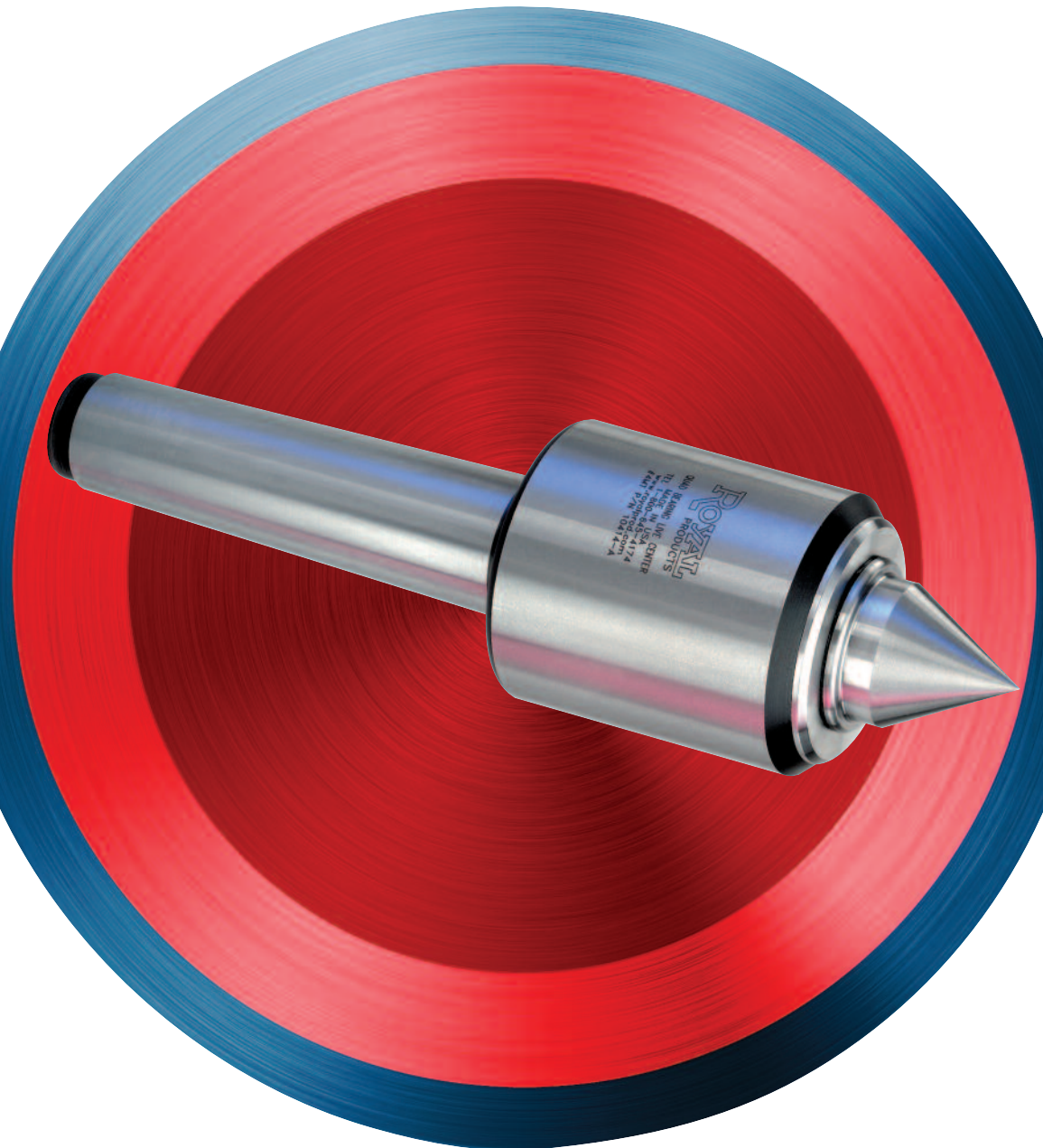




HIGH PERFORMANCE LIVE & DEAD CENTERS

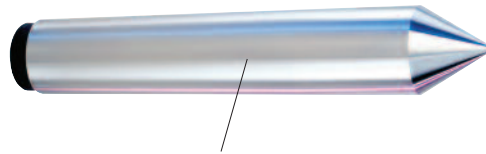
ROYAL MAKES THE BEST LIVE CENTERS ON EARTH





ROYAL DEAD CENTERS

- Dead centers are typically used for **grinding** and are also sometimes used in **high-precision turning** applications.
- Royal manufactures a wide range of standard dead centers to suit most applications, including: full, half, carbide-tipped, and extended-point models.
- All solid dead centers are made from ball bearing steel and are hardened to Rc 61-63 for wear resistance and durability.
- On carbide-tipped models, the carbide blank is brazed into a **close-tolerance socket for maximum strength and rigidity**.
- All Royal dead centers are ground to an angle of $60^\circ \begin{smallmatrix} +15^\circ \\ -0 \end{smallmatrix}$ and guaranteed to $\pm 0.00005''$ TIR.



Type 1
Standard Dead Center
add "1" to part number below.

Ball bearing steel hardened and ground to Rc 61-63 for long life.



Type 2
Standard Dead Center with carbide tip
add "2" to part number below.

Carbide blank is brazed into a close-tolerance socket for maximum strength and rigidity.



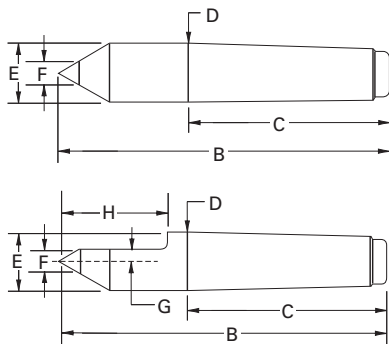
Type 3
1/2 Dead Center
add "3" to part number below.
Note – Type 3 models are being phased out. Please call for availability.

Half centers are relieved for grinding wheel clearance.



Type 4
1/2 Dead Center with carbide tip
add "4" to part number below.

A safety groove shows the maximum allowable regrind range for carbide-tipped models.



Royal Dead Centers

Example: A 2MT dead center with a carbide tip is PART NUMBER 11012.

TAPER A	B	C	D	E	F	G	H	PART NUMBER	PRICE			
									TYPE 1	TYPE 2	TYPE 3	TYPE 4
2 MT	4.19	2.56	.700	0.700	0.38	0.19	1.38	1101-	\$148	\$196	CALL	\$229
3 MT	5.25	3.19	.938	0.938	0.50	0.22	1.69	1102-	229	266	CALL	301
4 MT	6.75	4.06	1.231	1.231	0.50	0.25	2.25	1103-	329	350	CALL	384
5 MT	8.50	5.19	1.748	1.748	0.63	0.38	2.75	1104-	492	542	CALL	571

ROYAL "OIL COUNTRY" BULL HEAD DEAD CENTERS



- Designed for turning large tubes and pipes on lathes with live tailstocks.
- Can also be used in large-diameter grinding applications.
- Interchangeable heads (sold separately) offer maximum versatility.
- $\pm 0.0002"$ TIR guaranteed.
- Extraction nut (included) allows for easy removal from tailstock.
- Special extended models offered for Mazak** lathes.



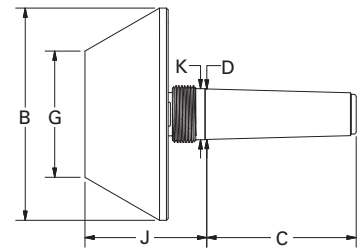
Modular Heads for Royal "Oil Country" Bull Head Dead Center

HEAD MODEL	B	G	HEAD WEIGHT (LBS.)	PART NUMBER	PRICE
A	4.62	1.63	7	10791	\$674
B	7.37	4.38	18	10792	1,041
C	10.12	7.13	33	10793	1,615
D	12.87	9.88	51	10794	2,310
E	15.62	12.63	65	10795	4,026



Royal "Oil Country" Bull Head Dead Center Shanks*

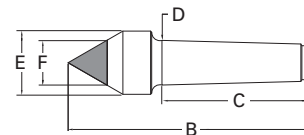
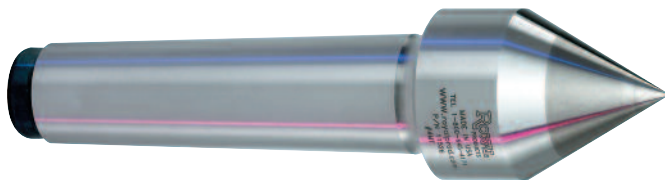
TAPER	MODEL	C	D	K	J WITH HEAD A	J WITH HEADS B-E	THREAD	PART NUMBER	PRICE
4MT	Standard	4.06	1.231	N/A	4.63	3.91	M42 x 1.5	11576*	\$444
4MT	Mazak**	4.06	1.231	1.260	4.85	4.13	M42 x 1.5	11577*	444
5 MT	Standard	5.19	1.748	N/A	4.63	3.91	M50 x 1.5	11578*	487
5 MT	Mazak**	5.19	1.748	1.772	5.06	4.34	M50 x 1.5	11579*	487
6 MT	Standard	7.25	2.494	N/A	4.69	3.97	M70 x 2	11580*	938
6 MT	Mazak**	7.25	2.494	2.500	5.29	4.57	M70 x 2	11581*	938



* Head not included – order separately

** Mazak is a registered trademark of Yamazaki Mazak Corporation

OVERSIZED CARBIDE POINT DEAD CENTERS



Royal Oversized Carbide Point Dead Centers

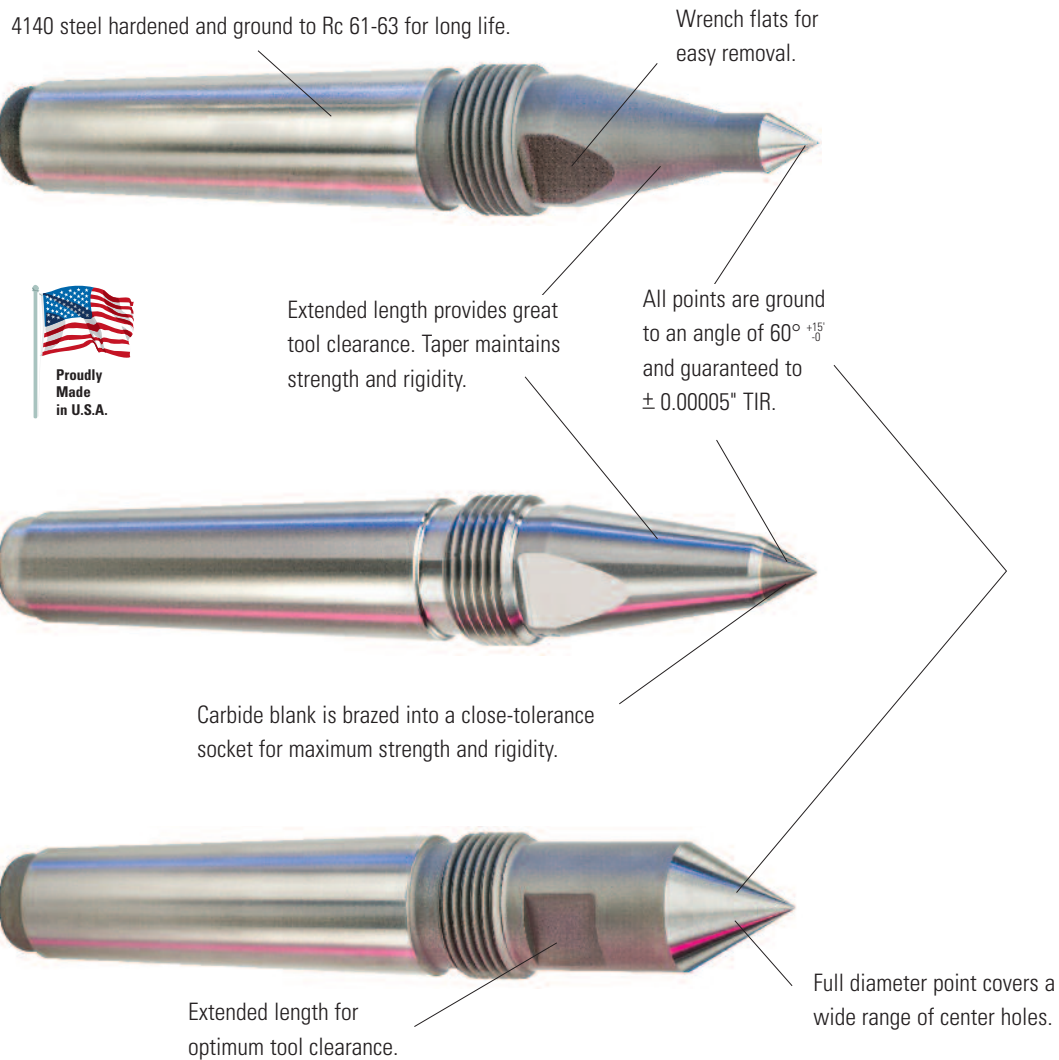
- Excellent for grinding and high precision turning applications.
- Oversized carbide point covers a wider range of center holes and provides great wear resistance.

TAPER A	B	C	D	E	CARBIDE DIAMETER F	PART NUMBER	PRICE
3 MT	5.57	3.19	0.938	1.25	1.00	11525	\$402
4 MT	6.75	4.06	1.231	1.75	1.25	11526	572
5 MT	8.50	5.19	1.748	1.75	1.25	11527	769

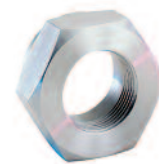


ROYAL CNC THREADED DEAD CENTERS

Great For Live Tailstocks and Precision Grinding

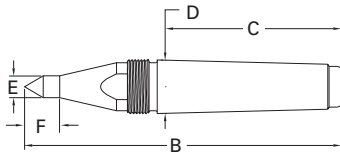


- ❑ Royal threaded dead centers are designed for use in CNC turning centers with **live tailstocks**.
- ❑ These dead centers are also widely used in precision grinding applications.
- ❑ Available in several styles to suit a wide range of applications.
 - CNC Point
 - Carbide-Tipped CNC Point
 - Full Diameter Extended Point
- ❑ Longer than normal gage length on all models provides outstanding clearance.
- ❑ Extraction nut and wrench flats enable easy removal from tailstock/spindle.



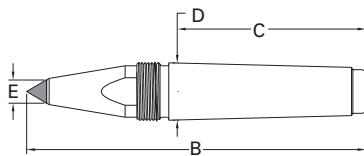
Extraction nut allows for easy removal from spindle. Order separately.

ROYAL CNC THREADED DEAD CENTERS



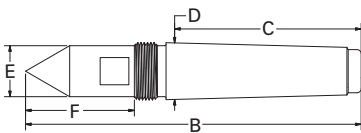
Royal CNC Threaded Dead Centers

TAPER A	B	C	D	E	F	THREAD	DEAD CENTER		EXTRACTION NUT	
							PART NUMBER	PRICE	PART NUMBER	PRICE
3 MT	5.94	3.19	0.938	0.38	0.63	1"-14	11530	\$274	11550	\$67
4 MT	7.31	4.06	1.231	0.50	0.81	1¼"-14	11531	332	11551	80
4 MT	7.31	4.06	1.231	0.75	1.18	1¼"-14	11535	332	11551	80
5 MT	8.44	5.19	1.748	0.50	0.81	1¾"-12	11532	474	11552	90
5 MT	8.44	5.19	1.748	0.75	1.18	1¾"-12	11537	474	11552	90



Royal CNC Threaded Dead Centers with Carbide-Tipped Point

TAPER A	B	C	D	E	THREAD	DEAD CENTER		EXTRACTION NUT	
						PART NUMBER	PRICE	PART NUMBER	PRICE
3 MT	5.94	3.19	0.938	0.38	1"-14	11540	\$372	11550	\$67
4 MT	7.31	4.06	1.231	0.50	1¼"-14	11541	448	11551	80
5 MT	8.44	5.19	1.748	0.50	1¾"-12	11542	576	11552	90



Royal Full Diameter Extended Point Threaded Dead Centers

TAPER A	B	C	D	E	F	THREAD	DEAD CENTER		EXTRACTION NUT	
							PART NUMBER	PRICE	PART NUMBER	PRICE
3 MT	5.94	3.19	0.938	0.86	1.88	1"-14	11534	\$274	11550	\$67
4 MT	7.31	4.06	1.231	1.11	2.37	1¼"-14	11536	332	11551	80
5 MT	8.44	5.19	1.748	1.25	2.36	1¾"-12	11539	474	11552	90