


Driving Shafts

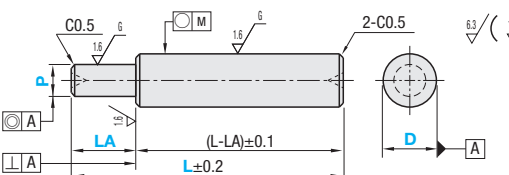
One End Stepped

Features: Rotary Shafts suitable for driving motion. Accuracies and shapes needed for rotary driving applications are selectable.




Type	D, P Tolerance	Concentricity	Perpendicularity	M Material	H Hardness	S Surface Treatment
KZBE	h7	Ø0.05	⊥0.05	S45C	-	Black Oxide
KZBN						-
KZBC						Black Oxide
KZBP	h6	Ø0.01	⊥0.01	S45C	-	Electroless Nickel Plating
KZBF						Induction Hardened Surface Hardness 50HRC-

D	Tolerance		D	Circularity M	
	h7	h6		KZBE	Others
10	0	-0.009	10	0.004	0.003
12	0	-0.009	12	0.005	
15	0	-0.011	15	0.005	
17	0	-0.011	17	0.005	
20	0	-0.013	20	0.006	
25	0	-0.013	25	0.006	
30	0	-0.013	30	0.005	
35	0	-0.016	35	-	
40	0	-0.016	40	-	
45	0	-0.016	45	-	
50	0	-0.016	50	-	



Ⓜ LA ≤ L/2
 Ⓜ The shaft may have centering holes on ends.
 Ⓜ There is an undercut 1.5mm or less in width and 0.3mm or less in depth on the stepped part.
 Ⓜ Step P of KZBE has no grinding undercut. Step R=0.2 or Less

Part Number	D	0.5mm Increment	1mm Increment	0.5mm Increment
Type		L	P	LA
KZBE (D10~30)	10	50.0~300.0	7~9	10.0~50.0
	12		7~11	10.0~50.0
	15		10~14	10.0~70.0
	17		10~16	10.0~70.0
	20		14~19	10.0~100.0
KZBN KZBC KZBP KZBF	25	100.0~500.0	14~24	10.0~100.0
	30		20~29	20.0~150.0
	*35		20~34	20.0~150.0
	*40		20~39	20.0~150.0
	*45		20~44	20.0~150.0
	*50	25~49	20.0~200.0	20.0~200.0


Ordering Example Part Number - **L** - **P** - **LA**
 KZBN30 - 320 - P25 - LA40

About KZBF (Induction Hardened)

When alterations on the right-hand page are specified, the shafts are induction hardened (except the threaded sections) after machining. As a result, these may occur:

- Due to thermal conduction to the thread, the threads may be hardened by 2 ~ 3mm.
- Induction Hardened may shrink the keyway width (around -0.01 ~ -0.02). If the key becomes hard to fit, adjust it by gauging.

* marked sizes are not available for KZBE.

Type	KZBE					KZBN					KZBC				
	Min. L	L100.5	L200.5	L300.5	L400.5	Min. L	L100.5	L200.5	L300.5	L400.5	Min. L	L100.5	L200.5	L300.5	L400.5
D	~100.0	~200.0	~300.0	~400.0	~500.0	~100.0	~200.0	~300.0	~400.0	~500.0	~100.0	~200.0	~300.0	~400.0	~500.0
10															
12				-	-				-	-				-	-
15				-	-				-	-				-	-
17				-	-				-	-				-	-
20				-	-				-	-				-	-
25				-	-				-	-				-	-
30				-	-				-	-				-	-
35	-	-	-	-	-				-	-				-	-
40	-	-	-	-	-				-	-				-	-
45	-	-	-	-	-				-	-				-	-
50	-	-	-	-	-				-	-				-	-

Type	KZBP					KZBF				
	Min. L	L100.5	L200.5	L300.5	L400.5	Min. L	L100.5	L200.5	L300.5	L400.5
D	~100.0	~200.0	~300.0	~400.0	~500.0	~100.0	~200.0	~300.0	~400.0	~500.0
10									-	-
12				-	-				-	-
15				-	-				-	-
17				-	-				-	-
20				-	-				-	-
25				-	-				-	-
30				-	-				-	-
35				-	-				-	-
40	-	-	-	-	-				-	-
45	-	-	-	-	-				-	-
50	-	-	-	-	-				-	-