

PUNCH GUIDE BUSHINGS

—LONG TYPE—

—Headed—		RoHS	Shank diameter D tolerance	M H	D dimension	Catalog No.	
	Dm5	Equivalent to SKH51 61~64HRC Equivalent to SKD11 60~63HRC	D3~5	A	LMHG	A LMHG D LHGD R LHGR E LHGE G LHGG	
							D+0.005/0
—Straight—		RoHS	Shank diameter D tolerance	M H	D dimension	Catalog No.	
	Dn5	Equivalent to SKH51 61~64HRC Equivalent to SKD11 60~63HRC	D3~5	A	LMSG	D LSGD R LSGR E LSGE G LSGG	
							D+0.005/0

D tolerance	Catalog No.	Type	D	L	0.01mm increments				B	b	d	H
					min. P	max. P	P·Kmax.	P·Wmin.				
D m5	(Equivalent to SKH51) Headed type (Dm5) Straight type (Dn5)	LMHG LMSG	(3)	10 13 16 20	0.30 ~ 0.70	—	—	—	2	4	2.0	4
			(4)	10 13 16 20 22 25	0.30 ~ 2.00	—	—	5				
D n5	(Equivalent to SKD11) Headed type (Dm5) Straight type (Dn5)	LMHG A—LMHG LMSG A—LMSG LHGD A—LHGD LSGD A—LSGD LHGR A—LHGR LSGR A—LSGR LHGE A—LHGE LSGE A—LSGE LHGG A—LHGG LSGG A—LSGG	(6)	10 13 16 20 22 25	1.00 ~ 3.00	3.00	1.00		0.15 ≤ R < 2 (R only)	3	6	3.4
			(8)	10 13 16 20 22 25	1.00 ~ 4.00	4.00	1.00	4				
D +0.005/0			(10)	10 13 16 20 22 25	2.00 ~ 6.00	6.00	1.20		6	8	6.4	13
			(13)	10 13 16 20 22 25	3.00 ~ 8.00	8.00	1.50	8				
D +0.007/0			(16)	10 13 16 20 22 25	3.00 ~ 10.00	10.00	2.00		6	10.6	10.6	19

The D = (6) straight type is a specification available for shape A only. D3 bushings are thin under the head. Be careful not to damage the bushings when mounting them.
D = (3), (4), and (5) are specifications available for m5 and n5 only.

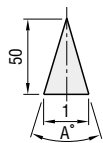
Order Catalog No. — L — P — W — R (R only)

LMHG 8 — 20 — P3.01
LSGR 13 — 16 — P7.22 — W3.22 — R0.50

Price Quotation

Days to Ship Quotation

• $\frac{1}{50}$ indicates a taper which expands by 1 mm over a length of 50 mm.



Taper	1/50	1/100
Angle (A')	1.146°	0.573°

Alterations	Code	Alterations				1Code
		A	D	R	E	
Alterations to guide	PC	Guide diameter change min.: P > PC ≥ Pmin/2 ≥ 0.50 0.01mm increments If PC is 1.50~1.99, then for D13, 16→B=4. max.: P < PC ≤ P+0.2	Guide diameter change min.: P > PC ≥ P·Wmin/2 ≥ 1.00 0.01mm increments max.: P < PC ≤ P·Kmax+0.2	—	—	Addition of single key flat to head Addition of single key flat Double key flats in parallel Can be combined with KC. Cannot be used for L(LC) < 16. Cannot be used for D3~6 for straight types. Cannot be combined with KC for shape A.
	WC	—	—	—	Key flat position change 1° increments Key flat position change 1° increments	
	BC	Guide length change 1 ≤ BC ≤ Bmax. 1 ≤ BC ≤ b 0.1mm increments Cannot be used for P < 1.00.	—	—		
	PKC	Tip diameter tolerance change P+0.01 → +0.005 0 → 0 Cannot be used for P < 1.00.	Tip diameter tolerance change P·W ± 0.01 → +0.01 0 → 0	—	—	
Alterations to full length	LC	Full length change (reduction in tip length) 10 ≤ L - (B-1) ≤ LC < L 0.1mm increments (If combined with LKC-LKZ, 0.01mm increments can be selected). b dimension and press-in lead are shortened by (L-LC). b ≥ 1	—	—	Head thickness tolerance change T +0.2/0 → +0.02/0 Cannot be used for L(LC) < 16.	
	LKC	Full length tolerance change L +0.4 → +0.05 +0.2 → 0	—	—		Head thickness tolerance change T +0.2/0 → -0.02 Cannot be used for L(LC) < 16.
	LKZ	Full length tolerance change L +0.4 → +0.01 +0.2 → 0	—	—		
Alterations to shank	SKC	—	—	—	Single key flat on shank Can be used for headed types only. Can be used for D ≥ 8 and L(LC) ≥ 20. Cannot be combined with KC-WKC.	