

# Simultaneous Grinding Spacers

Type	Material	Surface Treatment	Hardness
DWSSB	1045 Carbon Steel or Equivalent	Black Oxide	—
DWSSM		Electroless Nickel Plating	
DWSSS	304 Stainless Steel	—	
DWSSKB	O1 Tool Steel	Black Oxide	
DWSSKM		Electroless Nickel Plating	55 HRC min.

\*D=16 or Less: C0.1-0.2  
D=20 or More: C0.5 or less

Ⓢ Gang machining allows L Dimension variations to be within ±5μ per order.

Part Number	D 0.5 mm Increment	V 0.5 mm Increment (V 3 or more)	L		Simultaneous Grinding Maximum Quantity
			Machining Conditions	0.1 mm Increment	
DWSSB DWSSM DWSSS DWSSKB DWSSKM	4.0-10.0	0 2.0 2.6 3.0-8.0	L≤40 → D-V≥2 40.1≤L≤50 → D-V≥4	1.0-50.0	100 pcs.
	10.5-15.5	0 2.0 2.6 3.0-13.5	L≤40 → D-V≥2 40.1≤L≤80 → D-V≥4 80.1≤L≤100 → D-V≥6	1.0-100.0	50 pcs.
	16.0-20.0	0 2.0 2.6 3.0-18.0	L≤40 → D-V≥2 40.1≤L≤80 → D-V≥4 80.1≤L≤100 → D-V≥6		
	20.5-30.0	0 2.0 2.6 3.0-28.0	L≤50 → D-V≥2 50.1≤L≤100 → D-V≥6		
	30.5-39.5*	0 2.0 2.6 3.0-37.5	L≤50 → D-V≥2 50.1≤L≤100 → D-V≥6	20 pcs.	
	40.0-50.0*	0 2.0 2.6 3.0-48.0	L≤50 → D-V≥2 50.1≤L≤100 → D-V≥6		

- Ⓢ Not available for DWSSKB and DWSSKM.
- Ⓢ Common Machining Conditions: (1) L≤Vx8; (2) DWSSS (304 Stainless Steel) → L≥2
- Ⓢ Order more than one spacer.
- Ⓢ No specification available for sizes without declaration of value.

**Part Number Example** Part Number - D - V - L  
**DWSSS** - **D35.5** - **V12.5** - **L58.4**

# Stepped Spacers

Type	L Tolerance	Material	Surface Treatment
DCLB	0 -0.1	1045 Carbon Steel or Equivalent	Black Oxide
DCLM			Electroless Nickel Plating
DCLS	+0.1 0	304 Stainless Steel	—
MCLB			Black Oxide
MCLM			Electroless Nickel Plating
MCLS		304 Stainless Steel	—

6.3/(1.6/√)

Circumference C0.5 or less

Part Number	D <sub>H7</sub> 0.5 mm Increment	V <sub>H7</sub> 0.5 mm Increment	H 0.5 mm Increment	T 0.1 mm Increment	L 0.1 mm Increment
L Tolerance 0- -0.1 DCLB DCLM DCLS	5.0-10.0	2.0-8.0 V≤D-2	7.0-16.0 D+2≤H≤D+6	1.0-20.0	1.0-50.0
	10.5-20.0	2.0-18.0 V≤D-2	12.5-26.0 D+2≤H≤D+6		
L Tolerance +0.1 -0 MCLB MCLM MCLS	20.5-30.0	2.0-28.0 V≤D-2	22.5-40.0 D+2≤H≤D+10		
	30.5-40.0	6.0-36.0 V≤D-4	32.5-50.0 D+2≤H≤D+10		
	40.5-50.0	10.0-44.0 V≤D-6	42.5-60.0 D+2≤H≤D+10		

Ⓢ Common Machining Conditions: (1) L+T≤Vx8; (2) When V≥8 and L+T≥Vx4, intermediate clearance is added.

**Part Number Example** Part Number - D - V - H - T - L  
**DCLS** - **D25.5** - **V12.5** - **H33.5** - **T10.7** - **L40.2**

