

# Urethane Molded Bearings

## Inner Wheel Protruded

**Urethane Molded Bearings - Inner Wheel Protruded (For Light Load)**

RoHS10

**For Light Load**

**UMRW** (Both Sides Protruded)

**UMRV** (One Side Protruded)

**UMRR** (No Protrusion)

Operating Temperature Range: -20°C~40°C

Material	
Tire Section	Thermoplastic Ether Type Urethane (Black, Shore A95)
Wheel Section	Thermoplastic Lactone Type Urethane (Black)
Bearing	Outer Ring, Inner Ring, Balls: SUJ2 Shield: Rubber

W<sub>1</sub>, W<sub>2</sub> Tolerance D20~60  $\begin{matrix} 0 \\ -0.12 \end{matrix}$   
D65~80  $\begin{matrix} 0 \\ -0.15 \end{matrix}$

Ⓜ The structure of D20 to D35 is single layer (only for tire section).

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**Urethane Molded Bearings - Inner Wheel Protruded (For Heavy Load)**

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**For Heavy Load**

**UMRHW** (Both Sides Protruded)

**UMRHV** (One Side Protruded)

Operating Temperature Range: -20°C~40°C

Material	
Tire Section	Thermosetting Ether Type Urethane (Brown, Shore A95)
Bearing	Outer Ring, Inner Ring, Balls: SUJ2 Shield: Steel

W<sub>1</sub>, W<sub>2</sub> Tolerance D30~60  $\begin{matrix} 0 \\ -0.12 \end{matrix}$   
D65, 70  $\begin{matrix} 0 \\ -0.15 \end{matrix}$

**For Light Load**

Part Number Type	D	d	d Tolerance			d <sub>1</sub>	B	B <sub>1</sub>	W <sub>1</sub>	W <sub>2</sub>	Allowable Load N (Reference Value)	Mass (g)			Unit Price		
			UMRW, UMRV	UMRR	UMRR							UMRW	UMRV	UMRR	UMRW	UMRV	UMRR
UMRW (Both Sides Protruded)	20	6	0	-0.02		8.6	8	5	11	9.5	55	7	6	5			
	25	6				9.3	9	6	12	10.5	79	12	11	10			
	30	8	0	-0.04		12	11	7	15	13	108	21	19	17			
	35	8				14	12	8	16	14	147	24	22	20			
UMRV (One Side Protruded)	40	10			0	18.3	14	10	18	16	245	60	55	50			
	45	10			-0.008	(16.8)	14	10	18	16	274	66	61	56			
	50	12				21.6	15	11	19	17	314	82	76	70			
	55	12				(20.0)	15	11	19	17	343	90	83	77			
UMRR (No Protrusion)	60	15	+0.005	-0.012		24.6	16	12	20	18	392	120	112	104			
	65	15				(23.0)	16	12	20	18	441	130	121	113			
	70	17				29.3	18	14	22	20	510	188	175	164			
	75	17				(27.6)	18	14	22	20	589	199	187	176			
80	20	0	-0.01														

Ⓜ ( ) of d<sub>1</sub> dimension is applicable to UMRR. kgf=Nx0.101972

**For Heavy Load**

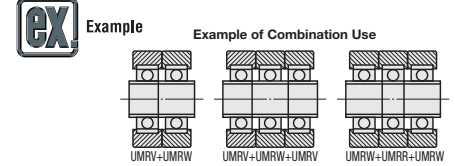
Part Number Type	D	d	d Tolerance	d <sub>1</sub>	d <sub>2</sub>	B	W <sub>1</sub>	W <sub>2</sub>	Allowable Load N (Reference Value)	Mass (g)		Unit Price	
										UMRHW	UMRHV	UMRHW	UMRHV
UMRHW (Both Sides Protruded)	30	8	0	-0.04		12.0	22	11	15	13	303	24	23
	35	8				18.3	32	14	18	16	347	28	27
	40	12				21.4	35	15	19	17	474	62	59
	45	15				25.1	37	16	20	18	579	78	75
UMRHV (One Side Protruded)	50	20				29.3	47	18	22	20	660	84	82
	55	20				33.8	52	19	23	21	794	157	151
	60	25	+0.005	-0.012							829	167	162
	65	25									918	199	191
70	25									1050	210	202	

kgf=Nx0.101972

**Ordering Example**

Part Number: **UMRW40**  
**UMRHV55**

- Features**
- As the bearing inner rings protrude, there is no need to combine stepped shafts or collars for mounting.
  - The urethane section is of a tire and wheel layered construction (Except for D20 - D35 are single layer). Economical small diameter shafts can be used even for large diameter rollers.
  - The bearings used have special configuration to prevent the urethane from detaching.
  - Though it excels in oil resistance, applying solvents may cause swelling and reduction in strength.



Note that, for some of the types shown here, order might be unable to be received by the MISUMI Indonesia offices.

# Urethane Press-Fit Bearings

**Features:** Can be purchased at low price and quick delivery as compared to conventional Molded Bearings.

**C-UMBB**

RoHS10

Ⓜ Material: Polyurethane (Black)  
Bearing: Steel  
Ⓜ Hardness: Shore A90

Ⓜ For bearing detailed dimensions, see P.989.

Part Number Type	d	D	B	D <sub>1</sub>	r (min)	Relative Dimension		Bearing Used	Unit Price
						D <sub>s</sub> (min)	R <sub>1</sub> (max)		
C-UMBB	4	13	4	9	0.15	5	0.1	684ZZ	
	5	16	4*	13	0.2	6.6	0.2	695ZZ	
	6	20	5	15	0.2	7.6	0.2	696ZZ	

\*Note that B dimension is different in C-UMBB5-16, and UMBB5-16 that appears on P.1151. In UMBB5-16, B=5. Moreover in C-UMBB5-16, Urethane Molded Bearings Shafts included on P.1155 are also not available.

Item	Magnitude of the force to peel Urethane from bearing			
	Rotation direction		Cross direction	
Measurement Method				
Product Type	Press-fit Bearing	Molded Bearing	Press-fit Bearing	Molded Bearing
Size	4-13	4kgf · m or more	8kgf · m or more	6kgf
	5-16	4kgf · m or more	8kgf · m or more	7kgf
	6-20	4kgf · m or more	8kgf · m or more	10kgf

No peeling at 20kgf

**ex** Example

Application direction	Sideways	Top	Bottom	Slanting
	Recommended Product	Press-fit Bearing	Press-fit Bearing	Lightweight: Press-Fit Bearings HeavyWeight: Molded Bearings

Ⓜ Note that even if it is applied from top, side and bottom, if there is unbalanced load due to mounting accuracy or backlash of work, or when used in high rotation, Urethane of the Press-Fit Bearing may come off.

**Ordering Example**

Part Number: **C-UMBB4** - **D**  
**13**