


# Silicon Rubber / Urethane Mold Bearings

## Threaded Crown Type

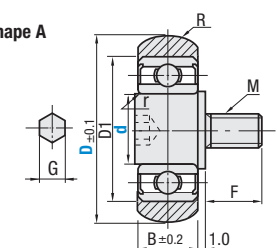


ⓘ Urethane (white) may turn yellow over time.

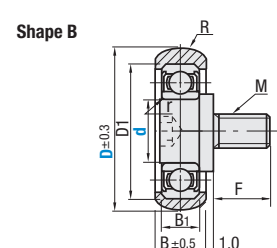
**RoHS 10**

Type		Material	Hardness	Color	Bearing	Shaft	
Standard	Long					Material	Surface Treatment
UMBRH	UMBRT	Urethane	Shore A90	Black	52100 Bearing Steel	SUM	Electroless Nickel Plating
UMSBRH	—				440C Stainless Steel	303 Stainless Steel	—
UMBWRH	UMBWRT			White	52100 Bearing Steel	SUM	Trivalent Chromate
UMSWRH	UMSWRT				440C Stainless Steel	303 Stainless Steel	—
UMBGRH	—	Shore A70	Black	52100 Bearing Steel	SUM	Electroless Nickel Plating	
UMBGWRH	—			52100 Bearing Steel	SUM	Trivalent Chromate	
SUMBRH	SUMBRT	Silicon Rubber	Shore A70	Light Gray	52100 Bearing Steel	SUM	Electroless Nickel Plating
SUMSBRH	SUMSBRT				440C Stainless Steel	303 Stainless Steel	—
UMBDRH	UMBDRT	Antistatic Urethane	Shore A90	Gray	52100 Bearing Steel	SUM	Electroless Nickel Plating

**Shape A**



**Shape B**



**Material:** Steel Type: Bearing 52100 Bearing Steel, Shaft SUM, Stainless Steel Type: Bearing 440C Stainless Steel, Shaft 303 Stainless Steel  
 Bearing Accuracy JISB1514 Class 0  
**Surface Treatment:** Electroless Nickel Plating, Electroless Nickel Plating, Trivalent Chromate  
 UMBR\_, UMBGRH\_, SUMBR\_, UMBDR\_, UMBWR\_, UMBGWRH

ⓘ No undercutting on threads. ⓘ For detailed bearing dimensions, please see P.1018-1019, 1028-1029.

### Shape A

Part Number	Type	d	D	M (Coarse)	F		Allowable Load N(kgf)			B	D <sub>1</sub>	r (min.)	G	R	Bearing		
					Standard	Long	Urethane										
							Shore A90	Shore A70	Silicon Shore A70								
Standard Threaded UMBRH, UMSBRH, UMBWRH, UMSWRH, UMBGRH, UMBGWRH, SUMBRH, SUMSBRH, UMBDRH	Long Threaded UMBRT	3	12	M3	4	6	34 (3.5)	10 (1)	9.8 (1)	3	7	0.1	1.5	5	W683ZZA		
		4	13	M4	5	8	44 (4.5)	13 (1.3)	13 (1.3)	4	9	0.15			W684AX50ZZ		
	5	16	59 (6)				16 (1.6)	18 (1.8)	5	13	0.2	624ZZ					
	5	16	M6	8	12	78 (8)	20 (2)	24 (2.4)	5	16	0.3	2.5			5	WBC5-13ZZ	
	6	20				157 (16)	23 (2.3)	24 (2.4)	6	19	0.2					625ZZ	
	6	20	M10	12	20	176 (18)	81 (8.3)	53 (5.4)	11	22	7	0.3			8	20	608ZZ
	8	28				274 (28)	136 (13.9)	82 (8.4)	12	32	9	0.6					6000ZZ
	8	28	M6	8	12	343 (35)	109 (11.1)	103 (10.5)	15	35	11	0.6			10	20	6200ZZ
10	30	490 (50)				225 (22.9)	147 (15)	18	47	14	0.3	6904ZZ					
10	40	M10	12	20	750 (70)	333 (34)	226 (23)	19	52	15	1	10	20	6204ZZ			
15	40				490 (50)	225 (22.9)	147 (15)	18	47	14	0.3			6205ZZ			
15	45	M10	12	20	490 (50)	225 (22.9)	147 (15)	18	47	14	0.3	10	20	6204ZZ			
20	45				750 (70)	333 (34)	226 (23)	19	52	15	1			6205ZZ			
20	55	M10	12	20	490 (50)	225 (22.9)	147 (15)	18	47	14	0.3	10	20	6204ZZ			
25	65				750 (70)	333 (34)	226 (23)	19	52	15	1			6205ZZ			

ⓘ Only d4-8 are available for \* marked types. ⓘ Allowable load is for reference.

### Shape B

Part Number	Type	d	D	M (Coarse)	F		Allowable Load N(kgf)			B	D <sub>1</sub>	B <sub>1</sub>	r (min.)	G	R	Bearing
					Standard	Long	Urethane									
							Shore A90	Shore A70	Silicon Shore A70							
Standard UMBRH, UMSBRH, UMBWRH, UMSWRH, UMBGRH, UMBGWRH, SUMBRH, SUMSBRH, UMBDRH	Long UMBRT	8	30	M6	8	12	176 (18)	81 (8.3)	53 (5.4)	11	22	7	0.3	4	15	608ZZ
		10	30				274 (28)	136 (13.9)	82 (8.4)	12	32	9	0.6			6000ZZ
	10	40	M10	12	20	343 (35)	109 (11.1)	103 (10.5)	15	35	11	0.6	8	20	6200ZZ	
	15	40				490 (50)	225 (22.9)	147 (15)	18	47	14	0.3			6904ZZ	
	15	45	M10	12	20	750 (70)	333 (34)	226 (23)	19	52	15	1	10	20	6202ZZ	
	20	45				490 (50)	225 (22.9)	147 (15)	18	47	14	0.3			6204ZZ	
	20	55	M10	12	20	750 (70)	333 (34)	226 (23)	19	52	15	1	10	20	6204ZZ	
	25	65				490 (50)	225 (22.9)	147 (15)	18	47	14	0.3			6205ZZ	

ⓘ Allowable load is for reference.

d	D	Unit Price					
		Urethane (Shore A90)		Urethane (Shore A70)		Silicon Rubber (Shore A70)	
		Steel Bearing	Stainless Steel Bearing	Steel Bearing	Steel Bearing	Stainless Steel Bearing	Steel Bearing
3	12	•	•	•	•	•	•
	13	•	•	•	•	•	•
	16	•	•	•	•	•	•
5	16	•	•	•	•	•	•
	20	•	•	•	•	•	•
6	20	•	•	•	•	•	•
	28	•	•	•	•	•	•
8	28	•	•	•	•	•	•
	30	•	•	•	•	•	•
10	30	•	•	•	•	•	•
	40	•	•	•	•	•	•
15	40	•	•	•	•	•	•
	45	•	•	•	•	•	•
20	45	•	•	•	•	•	•
	55	•	•	•	•	•	•
25	55	•	•	•	•	•	•
	65	•	•	•	•	•	•

**Part Number Example**

Part Number - D  
 SUMBRH20 - 55

### Properties of Antistatic Urethane


Item	Increment	UMBDRH, UMBDRT
Specific Volume Resistivity	Ωcm	2.1 x 10 <sup>8</sup>
Surface Resistivity	Ω	4.0 x 10 <sup>9</sup>

ⓘ Test Conditions (Temperature 30°C/Humidity 60%)  
 ⓘ Listed values are not guaranteed values but an example of measured values.

# Urethane Mold Bearings

## Inner Wheel Protruded Type For Light / Heavy Load

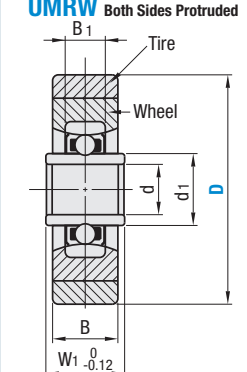
Features: As a mounting screw is already included, no extra retaining part is required.



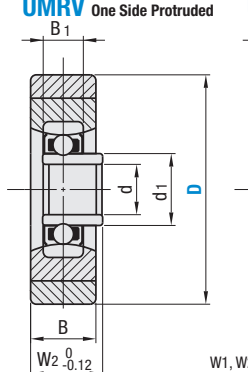
ⓘ Urethane (white) may turn yellow over time.

**Light Load**

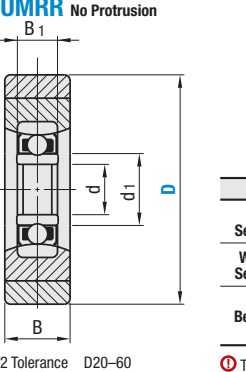
**UMRW Both Sides Protruded**




**UMRV One Side Protruded**



**UMRR No Protrusion**

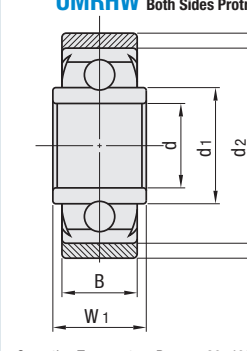


Operating Temperature Range: -20~40°C

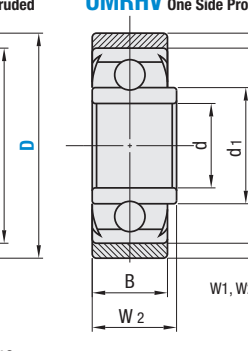


**Heavy Load**

**UMRHW Both Sides Protruded**



**UMRHV One Side Protruded**



Operating Temperature Range: -20~40°C

### 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)		
				UMRW / UMRV	UMRR	UMRW							UMRV	UMRR	
UMRW Both Sides Protruded	UMRW	20	6	0	0	8.6	8	5	11	9.5	55	7	6	5	
		25	-0.02	9.3		9	6	12	10.5	79	12	11	10		
		30	-0.04	12		11	7	15	13	108	21	19	17		
		35		14		12	8	16	14	147	24	22	20		
	UMRV One Side Protruded	UMRV	40	10	+0.005	-0.008	18.3 (16.8)	14	10	18	16	245	60	55	50
			45	12			274	66	61	56					
		50	15	314			82	76	70						
		55	17	343			90	83	77						
UMRR No Protrusion	UMRR	60	12	-0.012	0	24.6 (23.0)	16	12	20	18	392	120	112	104	
		65	14			441	130	121	113						
	70	17	510			188	175	164							
	80	20	589			199	187	176							

ⓘ d<sub>1</sub> dimension in ( ) is applicable to UMRV.

### Heavy Load

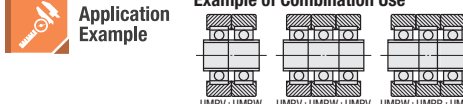
Part Number	Type	D	d	d Tolerance	d <sub>1</sub>	d <sub>2</sub>	B	W <sub>1</sub>	W <sub>2</sub>	Allowable Load N (Reference Value)	Mass (g)		
											UMRHW	UMRHV	
UMRHW Both Sides Protruded	UMRHW	30	8	0	12	22	11	15	13	303	24	23	
		35	18								347	28	27
		40	12								474	62	59
		45	15								579	78	75
	UMRHV One Side Protruded	UMRHV	50	20	+0.005	27.6	47	18	22	20	660	84	82
			55	26								794	157
		60	20	829								167	162
		65	25	918								199	191
70	25	1050	210	202									

**Part Number Example**

Part Number  
 UMRW40  
 UMRHV55

**Application Example**

**Example of Combination Use**



### Features

- As the bearing inner rings protrude, there is no need to combine stepped shafts or collars for mounting.
- The urethane part is a multi-layer structure consisting of tire section and wheel section (single layer for D20 to D35). It is economical as small diameter shafts can be used even for rollers with large external diameter.
- 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.