

TIMKEN® MV SERIES BALL BEARINGS IMPROVE MACHINE TOOL PERFORMANCE

Timken® MV series machine tool ball bearings deliver improved performance for precision at one million dN. This ball bearing is designed* to operate with low vibration and heat generation, allowing for smooth operation and low noise. Timken reaches beyond standard requirements and imposes tighter tolerances and uniformity that exceed ISO or ABMA standards for its machine tool offering. As a result, MV series bearing tolerances provide the dimensional and running accuracy required for effective control of machine tool spindles and other demanding applications operating up to one million dN.



POLYMER CAGE: LESS FRICTION

Timken engineers designed a ball-riding polymer cage to help make the Timken® MV series ball bearings smoother, quieter and operate at lower* temperatures. The light-weight polymer cage reduces friction, and therefore runs cooler. In addition, the new polymer cage specifically supports applications up to one million dN (bore in millimeters times speed in RPM).

REDUCED RUN-IN TIME

The polymer cage on the MV series bearings reduces friction and temperature. As a result, Timken MV series ball bearings can reach stabilized temperatures sooner, allowing for quicker run-in and set up times.

SPECIFY TIMKEN MV SERIES BALL BEARINGS FOR:

PRECISION TOLERANCES: Precision tolerances enable consistency across production runs. MV series running tolerances meet or exceed ISOP4/ABEC 7 precision standards. Precision tolerances provide a more consistent preload and contact angle.

CONTACT ANGLE OPTIONS: The contact angle options allow for varying application speeds and load requirements, increasing manufacturing flexibility for machine builders.

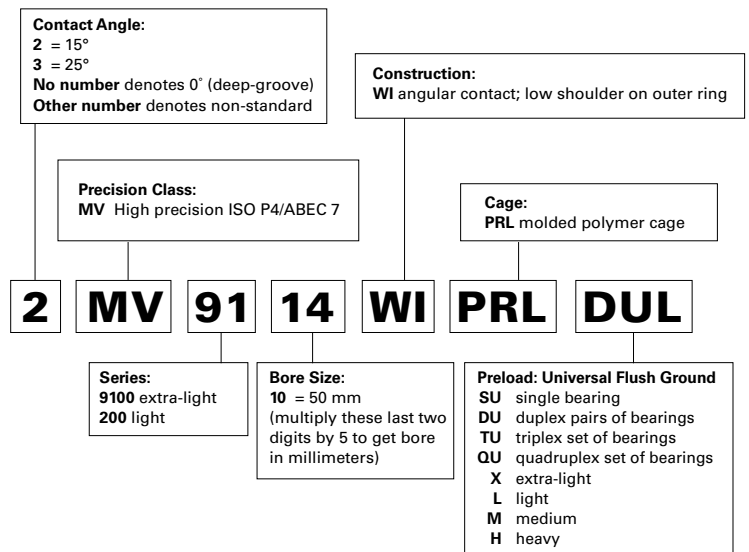
HIGH LOAD CAPACITY: Maximum capacity ball complement increases load-carrying capabilities and improves calculated bearing life.

MICRON CODED: Bore and outer diameter (O.D.) codes match and calibrate envelope dimensions for consistent preload and mounting practices.

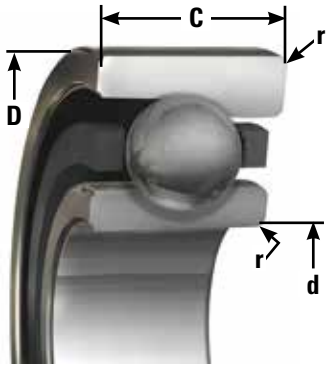
MOUNTING FLEXIBILITY: The MV series bearings are single row, universally ground and preloaded bearings. Operators can use the bearings as a single bearing or in sets. The bearings also can be mounted in several configurations, streamlining inventory.

*When compared to previous Timken design.

MV NOMENCLATURE



TIMKEN® MV SERIES BALL BEARINGS



(Ng) For a single, grease-lubricated, spring-preloaded bearing. This value to be used in permissible operating speed (Sp) calculation.

(1) Width tolerance of preloaded bearing set +0.000/-0.254 mm (+0.0000/-0.0100 in.).

(2) Fill weights based upon specific gravity of 0.99.

Please contact your Timken sales representative for additional sizes and designs.

Bearing Number 2MV or 3MV	d Bore	D O.D.	C Width(1)	Ball Qty. x Dia.	Bearing Wt.	(2MV) Load Ratings			(3MV) Load Ratings			10%	15%
						Co Static	Ce Dynamic	Speed Rating(Ng)	Co Static	Ce Dynamic	Speed Rating(Ng)		
		TOLERANCE: 0 to -(μ m)		mm/in.	kg	N		RPM	N		RPM	grams	
9106WI	30 (5)	55 (7)	13 (120)	14 x 7.1 14 x 9/32	0.113	10300	16800	25,500	9900	16000	23,000	0.50	0.76
9107WI	35 (6)	62 (7)	14 (120)	15 x 7.9 15 x 5/16	0.151	13700	21200	22,600	13000	20200	20,300	0.68	1.02
9108WI	40 (6)	68 (7)	15 (120)	16 x 7.9 16 x 5/16	0.187	14900	21900	19,900	14200	20800	17,900	0.82	1.23
9109WI	45 (6)	75 (7)	16 (120)	17 x 8.7 17 x 11/32	0.24	19300	27000	17,900	18300	25600	16,100	1.03	1.54
9110WI	50 (6)	80 (7)	16 (120)	18 x 8.7 18 x 11/32	0.258	20800	27900	16,300	19700	26300	14,700	1.20	1.81
9112WI	60 (7)	95 (8)	18 (150)	19 x 10.3 19 x 13/32	0.409	30500	38800	13,600	33200	36900	12,200	1.70	2.56
9113WI	65 (7)	100 (8)	18 (150)	20 x 10.3 20 x 13/32	0.435	32600	39800	12,700	31000	37700	11,400	1.81	2.72
9114WI	70 (7)	110 (8)	20 (150)	19 x 11.9 19 x 15/32	0.604	40700	50300	11,700	38800	47600	10,500	2.45	3.68
9115WI	75 (7)	115 (9)	20 (150)	20 x 11.9 20 x 15/32	0.638	43500	51600	11,000	41200	48900	9,900	2.59	3.88
9116WI	80 (8)	125 (9)	22 (200)	20 x 13.5 20 x 17/32	0.859	55200	64900	10,300	52500	61400	9,300	3.34	5.00
9117WI	85 (8)	130 (9)	22 (200)	21 x 13.5 21 x 17/32	0.901	58700	66700	9,700	55600	63200	8,700	3.82	5.73
9118WI	90 (8)	140 (9)	24 (200)	20 x 15.1 20 x 19/32	1.17	68900	79600	9,200	65800	75200	8,300	5.16	7.74
9120WI	100 (8)	150 (10)	24 (200)	22 x 15.1 22 x 19/32	1.299	77400	83600	8,300	73400	79200	7,500	5.55	8.32
9122WI	110 (8)	170 (10)	28 (200)	22 x 17.5 22 x 11/16	2.043	102700	109400	7,500	97400	103200	6,800	7.55	11.33
9124WI	120 (8)	180 (10)	28 (200)	23 x 17.5 23 x 11/16	2.18	108500	111200	6,900	103200	105000	6,200	7.77	11.65
204WI	20 (5.1)	47 (6.4)	14 (130)	10 x 7.94 10 x 5/16	0.103	8100	16100	35,700	7700	15500	32,100	0.51	0.76
205WI	25 (5.1)	52 (7.7)	15 (130)	12 x 7.94 12 x 5/16	0.127	10200	18400	29,800	9800	17600	26,800	0.62	0.94
206WI	30 (5.1)	62 (7.7)	16 (130)	12 x 9.53 12 x 3/8	0.195	14700	25500	25,100	14000	24400	22,600	0.84	1.26
207WI	35 (6.4)	72 (7.7)	17 (130)	12 x 11.11 12 x 7/16	0.282	20000	33700	21,600	19100	32200	19,400	1.18	1.77
208WI	40 (6.4)	80 (7.7)	18 (130)	11 x 12.70 11 x 1/2	0.352	23800	40400	19,300	22700	38700	17,400	1.57	2.35
209WI	45 (6.4)	85 (7.7)	19 (130)	13 x 12.7 13 x 1/2	0.408	28800	45200	17,500	27600	43100	15,800	1.74	2.61
210WI	50 (6.4)	90 (7.7)	20 (130)	14 x 12.70 14 x 1/2	0.457	31700	47400	16,000	30200	45200	14,400	2.10	3.15
211WI	55 (7.7)	100 (7.7)	21 (150)	14 x 14.29 14 x 9/16	0.608	40000	58700	14,500	38500	55900	13,100	2.56	3.84
212WI	60 (7.7)	110 (7.7)	22 (150)	14 x 15.88 14 x 5/8	0.787	48900	71000	13,200	47100	67700	11,900	3.23	4.84
213WI	65 (7.7)	120 (7.7)	23 (150)	14 x 16.67 14 x 21/32	0.998	54700	77400	12,100	52500	73700	10,900	3.87	5.81
214WI	70 (7.7)	125 (9)	24 (150)	14 x 17.46 14 x 11/16	1.074	60000	84200	11,400	57400	80200	10,300	4.51	6.76

Ready to learn more about Timken® MV series bearings? Contact your Timken sales representative or visit us online at www.timken.com.

TIMKEN

The Timken team applies their know-how to improve the reliability and performance of machinery in diverse markets worldwide. The company designs, makes and markets high-performance mechanical components, including bearings, belts, gears, chain and related mechanical power transmission products and services.

www.timken.com

Stronger. Commitment. Stronger. Value. Stronger. Worldwide. Stronger. Together. | Stronger. By Design.