

Timken Machine Tool

High Speed Spindle Bearing Interchange List



ISO 10 Series with a 15 deg Contact Angle and Steel Balls

ISO 10 Series with a 15 deg Contact Angle and Ceramic Balls

Bore (mm)	O.D. (mm)	Width (mm)	Timken	NSK	FAG	Barden	NTN	SKF	SNFA
10	26	8	2MMV9100HX CR SUL		HS7000C.T.P4S.UL	ZSB100HCUL		7000CE/P4A GA	VEX10 7CE1 UL
12	28	8	2MMV9101HX CR SUL		HS7001C.T.P4S.UL	ZSB101HCUL		7001CE/P4A GA	VEX12 7CE1 UL
15	32	9	2MMV9102HX CR SUL		HS7002C.T.P4S.UL	ZSB102HCUL		7002CE/P4A GA	VEX15 7CE1 UL
17	35	10	2MMV9103HX CR SUL		HS7003C.T.P4S.UL	ZSB103HCUL		7003CE/P4A GA	VEX17 7CE1 UL
20	42	12	2MMV9104HX CR SUL		HS7004C.T.P4S.UL	ZSB104HCUL		7004CE/P4A GA	VEX20 7CE1 UL
25	47	12	2MMV9105HX CR SUL		HS7005C.T.P4S.UL	ZSB105HCUL		7005CE/P4A GA	VEX25 7CE1 UL
30	55	13	2MMV9106HX CR SUL	30BNC10TRLP3	HS7006C.T.P4S.UL	ZSB106HCUL		7006CE/P4A GA	VEX30 7CE1 UL
35	62	14	2MMV9107HX CR SUL	35BNC10TRLP3	HS7007C.T.P4S.UL	ZSB107HCUL		7007CE/P4A GA	VEX35 7CE1 UL
40	68	15	2MMV9108HX CR SUL	40BNC10TRLP3	HS7008C.T.P4S.UL	ZSB108HCUL		7008CE/P4A GA	VEX40 7CE1 UL
45	75	16	2MMV9109HX CR SUL	45BNC10TRLP3	HS7009C.T.P4S.UL	ZSB109HCUL		7009CE/P4A GA	VEX45 7CE1 UL
50	80	16	2MMV9110HX CR SUL	50BNC10TRLP3	HS7010C.T.P4S.UL	ZSB110HCUL	2LA-HSE010C G/GL P42	7010CE/P4A GA	VEX50 7CE1 UL
55	90	18	2MMV9111HX CR SUL	55BNC10TRLP3	HS7011C.T.P4S.UL	ZSB111HCUL	2LA-HSE011C G/GL P42	7011CE/P4A GA	VEX55 7CE1 UL
60	95	18	2MMV9112HX CR SUL	60BNC10TRLP3	HS7012C.T.P4S.UL	ZSB112HCUL	2LA-HSE012C G/GL P42	7012CE/P4A GA	VEX60 7CE1 UL
65	100	18	2MMV9113HX CR SUL	65BNC10TRLP3	HS7013C.T.P4S.UL	ZSB113HCUL	2LA-HSE013C G/GL P42	7013CE/P4A GA	VEX65 7CE1 UL
70	110	20	2MMV9114HX CR SUL	70BNC10TRLP3	HS7014C.T.P4S.UL	ZSB114HCUL	2LA-HSE014C G/GL P42	7014CE/P4A GA	VEX70 7CE1 UL
75	115	20	2MMV9115HX CR SUL	75BNC10TRLP3	HS7015C.T.P4S.UL	ZSB115HCUL	2LA-HSE015C G/GL P42	7015CE/P4A GA	VEX75 7CE1 UL
80	125	22	2MMV9116HX CR SUL	80BNC10TRLP3	HS7016C.T.P4S.UL	ZSB116HCUL	2LA-HSE016C G/GL P42	7016CE/P4A GA	VEX80 7CE1 UL
85	130	22	2MMV9117HX CR SUL	85BNC10TRLP3	HS7017C.T.P4S.UL	ZSB117HCUL	2LA-HSE017C G/GL P42	7017CE/P4A GA	VEX85 7CE1 UL
90	140	24	2MMV9118HX CR SUL	90BNC10TRLP3	HS7018C.T.P4S.UL	ZSB118HCUL	2LA-HSE018C G/GL P42	7018CE/P4A GA	VEX90 7CE1 UL
95	145	24	2MMV9119HX CR SUL	95BNC10TRLP3	HS7019C.T.P4S.UL	ZSB119HCUL	2LA-HSE019C G/GL P42	7019CE/P4A GA	VEX95 7CE1 UL
100	150	24	2MMV9120HX CR SUL	100BNC10TRLP3	HS7020C.T.P4S.UL	ZSB120HCUL	2LA-HSE020C G/GL P42	7020CE/P4A GA	VEX100 7CE1 UL
105	160	26	2MMV9121HX CR SUL	105BNC10TRLP3	HS7021C.T.P4S.UL	ZSB121HCUL	2LA-HSE021C G/GL P42	7021CE/P4A GA	VEX105 7CE1 UL
110	170	28	2MMV9122HX CR SUL	110BNC10TRLP3	HS7022C.T.P4S.UL	ZSB122HCUL	2LA-HSE022C G/GL P42	7022CE/P4A GA	VEX110 7CE1 UL
120	180	28	2MMV9124HX CR SUL	120BNC10TRLP3	HS7024C.T.P4S.UL	ZSB124HCUL	2LA-HSE024C G/GL P42	7024CE/P4A GA	VEX120 7CE1 UL
10	26	8	2MMVC9100HX CR SUL		HC7000C.T.P4S.UL	CZSB100HCUL		7000CE/HCP4A GA	VEX10 /NS 7CE1 UL
12	28	8	2MMVC9101HX CR SUL		HC7001C.T.P4S.UL	CZSB101HCUL		7001CE/HCP4A GA	VEX12 /NS 7CE1 UL
15	32	9	2MMVC9102HX CR SUL		HC7002C.T.P4S.UL	CZSB102HCUL		7002CE/HCP4A GA	VEX15 /NS 7CE1 UL
17	35	10	2MMVC9103HX CR SUL		HC7003C.T.P4S.UL	CZSB103HCUL		7003CE/HCP4A GA	VEX17 /NS 7CE1 UL
20	42	12	2MMVC9104HX CR SUL		HC7004C.T.P4S.UL	CZSB104HCUL		7004CE/HCP4A GA	VEX20 /NS 7CE1 UL
25	47	12	2MMVC9105HX CR SUL		HC7005C.T.P4S.UL	CZSB105HCUL		7005CE/HCP4A GA	VEX25 /NS 7CE1 UL
30	55	13	2MMVC9106HX CR SUL	30BNC10SN24TRLP3	HC7006C.T.P4S.UL	CZSB106HCUL		7006CE/HCP4A GA	VEX30 /NS 7CE1 UL
35	62	14	2MMVC9107HX CR SUL	35BNC10SN24TRLP3	HC7007C.T.P4S.UL	CZSB107HCUL		7007CE/HCP4A GA	VEX35 /NS 7CE1 UL
40	68	15	2MMVC9108HX CR SUL	40BNC10SN24TRLP3	HC7008C.T.P4S.UL	CZSB108HCUL		7008CE/HCP4A GA	VEX40 /NS 7CE1 UL
45	75	16	2MMVC9109HX CR SUL	45BNC10SN24TRLP3	HC7009C.T.P4S.UL	CZSB109HCUL		7009CE/HCP4A GA	VEX45 /NS 7CE1 UL
50	80	16	2MMVC9110HX CR SUL	50BNC10SN24TRLP3	HC7010C.T.P4S.UL	CZSB110HCUL	5S-2LA-HSE010C G/GL P42	7010CE/HCP4A GA	VEX50 /NS 7CE1 UL
55	90	18	2MMVC9111HX CR SUL	55BNC10SN24TRLP3	HC7011C.T.P4S.UL	CZSB111HCUL	5S-2LA-HSE011C G/GL P42	7011CE/HCP4A GA	VEX55 /NS 7CE1 UL
60	95	18	2MMVC9112HX CR SUL	60BNC10SN24TRLP3	HC7012C.T.P4S.UL	CZSB112HCUL	5S-2LA-HSE012C G/GL P42	7012CE/HCP4A GA	VEX60 /NS 7CE1 UL
65	100	18	2MMVC9113HX CR SUL	65BNC10SN24TRLP3	HC7013C.T.P4S.UL	CZSB113HCUL	5S-2LA-HSE013C G/GL P42	7013CE/HCP4A GA	VEX65 /NS 7CE1 UL
70	110	20	2MMVC9114HX CR SUL	70BNC10SN24TRLP3	HC7014C.T.P4S.UL	CZSB114HCUL	5S-2LA-HSE014C G/GL P42	7014CE/HCP4A GA	VEX70 /NS 7CE1 UL
75	115	20	2MMVC9115HX CR SUL	75BNC10SN24TRLP3	HC7015C.T.P4S.UL	CZSB115HCUL	5S-2LA-HSE015C G/GL P42	7015CE/HCP4A GA	VEX75 /NS 7CE1 UL
80	125	22	2MMVC9116HX CR SUL	80BNC10SN24TRLP3	HC7016C.T.P4S.UL	CZSB116HCUL	5S-2LA-HSE016C G/GL P42	7016CE/HCP4A GA	VEX80 /NS 7CE1 UL
85	130	22	2MMVC9117HX CR SUL	85BNC10SN24TRLP3	HC7017C.T.P4S.UL	CZSB117HCUL	5S-2LA-HSE017C G/GL P42	7017CE/HCP4A GA	VEX85 /NS 7CE1 UL
90	140	24	2MMVC9118HX CR SUL	90BNC10SN24TRLP3	HC7018C.T.P4S.UL	CZSB118HCUL	5S-2LA-HSE018C G/GL P42	7018CE/HCP4A GA	VEX90 /NS 7CE1 UL
95	145	24	2MMVC9119HX CR SUL	95BNC10SN24TRLP3	HC7019C.T.P4S.UL	CZSB119HCUL	5S-2LA-HSE019C G/GL P42	7019CE/HCP4A GA	VEX95 /NS 7CE1 UL
100	150	24	2MMVC9120HX CR SUL	100BNC10SN24TRLP3	HC7020C.T.P4S.UL	CZSB120HCUL	5S-2LA-HSE020C G/GL P42	7020CE/HCP4A GA	VEX100 /NS 7CE1 UL
105	160	26	2MMVC9121HX CR SUL	105BNC10SN24TRLP3	HC7021C.T.P4S.UL	CZSB121HCUL	5S-2LA-HSE021C G/GL P42	7021CE/HCP4A GA	VEX105 /NS 7CE1 UL
110	170	28	2MMVC9122HX CR SUL	110BNC10SN24TRLP3	HC7022C.T.P4S.UL	CZSB122HCUL	5S-2LA-HSE022C G/GL P42	7022CE/HCP4A GA	VEX110 /NS 7CE1 UL
120	180	28	2MMVC9124HX CR SUL	120BNC10SN24TRLP3	HC7024C.T.P4S.UL	CZSB124HCUL	5S-2LA-HSE024C G/GL P42	7024CE/HCP4A GA	VEX120 /NS 7CE1 UL

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High Speed Spindle Bearing Interchange List



ISO 10 Series with a 25 deg Contact Angle and Steel Balls

Bore (mm)	O.D. (mm)	Width (mm)	Timken	NSK	FAG	Barden	NTN	SKF	SNFA
10	26	8	3MMV9100HX CR SUL		HS7000E.T.P4S.UL	ZSB100HEUL		7000ACE/P4A GA	VEX10 7CE3 UL
12	28	8	3MMV9101HX CR SUL		HS7001E.T.P4S.UL	ZSB101HEUL		7001ACE/P4A GA	VEX12 7CE3 UL
15	32	9	3MMV9102HX CR SUL		HS7002E.T.P4S.UL	ZSB102HEUL		7002ACE/P4A GA	VEX15 7CE3 UL
17	35	10	3MMV9103HX CR SUL		HS7003E.T.P4S.UL	ZSB103HEUL		7003ACE/P4A GA	VEX17 7CE3 UL
20	42	12	3MMV9104HX CR SUL		HS7004E.T.P4S.UL	ZSB104HEUL		7004ACE/P4A GA	VEX20 7CE3 UL
25	47	12	3MMV9105HX CR SUL		HS7005E.T.P4S.UL	ZSB105HEUL		7005ACE/P4A GA	VEX25 7CE3 UL
30	55	13	3MMV9106HX CR SUL		HS7006E.T.P4S.UL	ZSB106HEUL		7006ACE/P4A GA	VEX30 7CE3 UL
35	62	14	3MMV9107HX CR SUL		HS7007E.T.P4S.UL	ZSB107HEUL		7007ACE/P4A GA	VEX35 7CE3 UL
40	68	15	3MMV9108HX CR SUL		HS7008E.T.P4S.UL	ZSB108HEUL		7008ACE/P4A GA	VEX40 7CE3 UL
45	75	16	3MMV9109HX CR SUL		HS7009E.T.P4S.UL	ZSB109HEUL		7009ACE/P4A GA	VEX45 7CE3 UL
50	80	16	3MMV9110HX CR SUL		HS7010E.T.P4S.UL	ZSB110HEUL	2LA-HSE010AD G/GL P42	7010ACE/P4A GA	VEX50 7CE3 UL
55	90	18	3MMV9111HX CR SUL		HS7011E.T.P4S.UL	ZSB111HEUL	2LA-HSE011AD G/GL P42	7011ACE/P4A GA	VEX55 7CE3 UL
60	95	18	3MMV9112HX CR SUL		HS7012E.T.P4S.UL	ZSB112HEUL	2LA-HSE012AD G/GL P42	7012ACE/P4A GA	VEX60 7CE3 UL
65	100	18	3MMV9113HX CR SUL		HS7013E.T.P4S.UL	ZSB113HEUL	2LA-HSE013AD G/GL P42	7013ACE/P4A GA	VEX65 7CE3 UL
70	110	20	3MMV9114HX CR SUL		HS7014E.T.P4S.UL	ZSB114HEUL	2LA-HSE014AD G/GL P42	7014ACE/P4A GA	VEX70 7CE3 UL
75	115	20	3MMV9115HX CR SUL		HS7015E.T.P4S.UL	ZSB115HEUL	2LA-HSE015AD G/GL P42	7015ACE/P4A GA	VEX75 7CE3 UL
80	125	22	3MMV9116HX CR SUL		HS7016E.T.P4S.UL	ZSB116HEUL	2LA-HSE016AD G/GL P42	7016ACE/P4A GA	VEX80 7CE3 UL
85	130	22	3MMV9117HX CR SUL		HS7017E.T.P4S.UL	ZSB117HEUL	2LA-HSE017AD G/GL P42	7017ACE/P4A GA	VEX85 7CE3 UL
90	140	24	3MMV9118HX CR SUL		HS7018E.T.P4S.UL	ZSB118HEUL	2LA-HSE018AD G/GL P42	7018ACE/P4A GA	VEX90 7CE3 UL
95	145	24	3MMV9119HX CR SUL		HS7019E.T.P4S.UL	ZSB119HEUL	2LA-HSE019AD G/GL P42	7019ACE/P4A GA	VEX95 7CE3 UL
100	150	24	3MMV9120HX CR SUL		HS7020E.T.P4S.UL	ZSB120HEUL	2LA-HSE020AD G/GL P42	7020ACE/P4A GA	VEX100 7CE3 UL
105	160	26	3MMV9121HX CR SUL		HS7021E.T.P4S.UL	ZSB121HEUL	2LA-HSE021AD G/GL P42	7021ACE/P4A GA	VEX105 7CE3 UL
110	170	28	3MMV9122HX CR SUL		HS7022E.T.P4S.UL	ZSB122HEUL	2LA-HSE022AD G/GL P42	7022ACE/P4A GA	VEX110 7CE3 UL
120	180	28	3MMV9124HX CR SUL		HS7024E.T.P4S.UL	ZSB124HEUL	2LA-HSE024AD G/GL P42	7024ACE/P4A GA	VEX120 7CE3 UL

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High Speed Spindle Bearing Interchange List



ISO 10 Series with a 25 deg Contact Angle and Ceramic Balls

ISO 19 Series with a 15 deg Contact Angle and Steel Balls

Bore (mm)	O.D. (mm)	Width (mm)	Timken	NSK	FAG	Barden	NTN	SKF	SNFA
10	26	8	3MMVC9100HX VV SUL		HCS7000E.T.P4S.UL	CZSB100HERRUL		S7000ACE/HCP4A GA	VEX10 /S/NS 7CE3 UL
12	28	8	3MMVC9101HX VV SUL		HCS7001E.T.P4S.UL	CZSB101HERRUL		S7001ACE/HCP4A GA	VEX12 /S/NS 7CE3 UL
15	32	9	3MMVC9102HX VV SUL		HCS7002E.T.P4S.UL	CZSB102HERRUL		S7002ACE/HCP4A GA	VEX15 /S/NS 7CE3 UL
17	35	10	3MMVC9103HX VV SUL		HCS7003E.T.P4S.UL	CZSB103HERRUL		S7003ACE/HCP4A GA	VEX17 /S/NS 7CE3 UL
20	42	12	3MMVC9104HX VV SUL		HCS7004E.T.P4S.UL	CZSB104HERRUL		S7004ACE/HCP4A GA	VEX20 /S/NS 7CE3 UL
25	47	12	3MMVC9105HX VV SUL		HCS7005E.T.P4S.UL	CZSB105HERRUL		S7005ACE/HCP4A GA	VEX25 /S/NS 7CE3 UL
30	55	13	3MMVC9106HX VV SUL		HCS7006E.T.P4S.UL	CZSB106HERRUL		S7006ACE/HCP4A GA	VEX30 /S/NS 7CE3 UL
35	62	14	3MMVC9107HX VV SUL		HCS7007E.T.P4S.UL	CZSB107HERRUL		S7007ACE/HCP4A GA	VEX35 /S/NS 7CE3 UL
40	68	15	3MMVC9108HX VV SUL		HCS7008E.T.P4S.UL	CZSB108HERRUL		S7008ACE/HCP4A GA	VEX40 /S/NS 7CE3 UL
45	75	16	3MMVC9109HX VV SUL		HCS7009E.T.P4S.UL	CZSB109HERRUL		S7009ACE/HCP4A GA	VEX45 /S/NS 7CE3 UL
50	80	16	3MMVC9110HX VV SUL		HCS7010E.T.P4S.UL	CZSB110HERRUL	5S-2LA-HSE010AD LLB G/GL P42	S7010ACE/HCP4A GA	VEX50 /S/NS 7CE3 UL
55	90	18	3MMVC9111HX VV SUL		HCS7011E.T.P4S.UL	CZSB111HERRUL	5S-2LA-HSE011AD LLB G/GL P42	S7011ACE/HCP4A GA	VEX55 /S/NS 7CE3 UL
60	95	18	3MMVC9112HX VV SUL		HCS7012E.T.P4S.UL	CZSB112HERRUL	5S-2LA-HSE012AD LLB G/GL P42	S7012ACE/HCP4A GA	VEX60 /S/NS 7CE3 UL
65	100	18	3MMVC9113HX VV SUL		HCS7013E.T.P4S.UL	CZSB113HERRUL	5S-2LA-HSE013AD LLB G/GL P42	S7013ACE/HCP4A GA	VEX65 /S/NS 7CE3 UL
70	110	20	3MMVC9114HX VV SUL		HCS7014E.T.P4S.UL	CZSB114HERRUL	5S-2LA-HSE014AD LLB G/GL P42	S7014ACE/HCP4A GA	VEX70 /S/NS 7CE3 UL
75	115	20	3MMVC9115HX VV SUL		HCS7015E.T.P4S.UL	CZSB115HERRUL	5S-2LA-HSE015AD LLB G/GL P42	S7015ACE/HCP4A GA	VEX75 /S/NS 7CE3 UL
80	125	22	3MMVC9116HX VV SUL		HCS7016E.T.P4S.UL	CZSB116HERRUL	5S-2LA-HSE016AD LLB G/GL P42	S7016ACE/HCP4A GA	VEX80 /S/NS 7CE3 UL
85	130	22	3MMVC9117HX VV SUL		HCS7017E.T.P4S.UL	CZSB117HERRUL	5S-2LA-HSE017AD LLB G/GL P42	S7017ACE/HCP4A GA	VEX85 /S/NS 7CE3 UL
90	140	24	3MMVC9118HX VV SUL		HCS7018E.T.P4S.UL	CZSB118HERRUL	5S-2LA-HSE018AD LLB G/GL P42	S7018ACE/HCP4A GA	VEX90 /S/NS 7CE3 UL
95	145	24	3MMVC9119HX VV SUL		HCS7019E.T.P4S.UL	CZSB119HERRUL	5S-2LA-HSE019AD LLB G/GL P42	S7019ACE/HCP4A GA	VEX95 /S/NS 7CE3 UL
100	150	24	3MMVC9120HX VV SUL		HCS7020E.T.P4S.UL	CZSB120HERRUL	5S-2LA-HSE020AD LLB G/GL P42	S7020ACE/HCP4A GA	VEX100 /S/NS 7CE3 UL
105	160	26	3MMVC9121HX VV SUL		HCS7021E.T.P4S.UL	CZSB121HERRUL	5S-2LA-HSE021AD LLB G/GL P42	S7021ACE/HCP4A GA	VEX105 /S/NS 7CE3 UL
110	170	28	3MMVC9122HX VV SUL		HCS7022E.T.P4S.UL	CZSB122HERRUL	5S-2LA-HSE022AD LLB G/GL P42	S7022ACE/HCP4A GA	VEX110 /S/NS 7CE3 UL
120	180	28	3MMVC9124HX VV SUL		HCS7024E.T.P4S.UL	CZSB124HERRUL	5S-2LA-HSE024AD LLB G/GL P42	S7024ACE/HCP4A GA	VEX120 /S/NS 7CE3 UL
10	22	6	2MMV9300HX VV SUL		HSS71900C.T.P4S.UL	ZSB1900HCRRUL		S71900CE/P4A GA	VEB10 /S 7CE1 UL
12	24	6	2MMV9301HX VV SUL		HSS71901C.T.P4S.UL	ZSB1901HCRRUL		S71901CE/P4A GA	VEB12 /S 7CE1 UL
15	28	7	2MMV9302HX VV SUL		HSS71902C.T.P4S.UL	ZSB1902HCRRUL		S71902CE/P4A GA	VEB15 /S 7CE1 UL
17	30	7	2MMV9303HX VV SUL		HSS71903C.T.P4S.UL	ZSB1903HCRRUL		S71903CE/P4A GA	VEB17 /S 7CE1 UL
20	37	9	2MMV9304HX VV SUL		HSS71904C.T.P4S.UL	ZSB1904HCRRUL		S71904CE/P4A GA	VEB20 /S 7CE1 UL
25	42	9	2MMV9305HX VV SUL		HSS71905C.T.P4S.UL	ZSB1905HCRRUL		S71905CE/P4A GA	VEB25 /S 7CE1 UL
30	47	9	2MMV9306HX VV SUL		HSS71906C.T.P4S.UL	ZSB1906HCRRUL		S71906CE/P4A GA	VEB30 /S 7CE1 UL
35	55	10	2MMV9307HX VV SUL	35BNC19TRV1VLP3	HSS71907C.T.P4S.UL	ZSB1907HCRRUL		S71907CE/P4A GA	VEB35 /S 7CE1 UL
40	62	12	2MMV9308HX VV SUL	40BNC19TRV1VLP3	HSS71908C.T.P4S.UL	ZSB1908HCRRUL		S71908CE/P4A GA	VEB40 /S 7CE1 UL
45	68	12	2MMV9309HX VV SUL	45BNC19TRV1VLP3	HSS71909C.T.P4S.UL	ZSB1909HCRRUL		S71909CE/P4A GA	VEB45 /S 7CE1 UL
50	72	12	2MMV9310HX VV SUL	50BNC19TRV1VLP3	HSS71910C.T.P4S.UL	ZSB1910HCRRUL	2LA-HSE910C LLB G/GL P42	S71910CE/P4A GA	VEB50 /S 7CE1 UL
55	80	13	2MMV9311HX VV SUL	55BNC19TRV1VLP3	HSS71911C.T.P4S.UL	ZSB1911HCRRUL	2LA-HSE911C LLB G/GL P42	S71911CE/P4A GA	VEB55 /S 7CE1 UL
60	85	13	2MMV9312HX VV SUL	60BNC19TRV1VLP3	HSS71912C.T.P4S.UL	ZSB1912HCRRUL	2LA-HSE912C LLB G/GL P42	S71912CE/P4A GA	VEB60 /S 7CE1 UL
65	90	13	2MMV9313HX VV SUL	65BNC19TRV1VLP3	HSS71913C.T.P4S.UL	ZSB1913HCRRUL	2LA-HSE913C LLB G/GL P42	S71913CE/P4A GA	VEB65 /S 7CE1 UL
70	100	16	2MMV9314HX VV SUL	70BNC19TRV1VLP3	HSS71914C.T.P4S.UL	ZSB1914HCRRUL	2LA-HSE914C LLB G/GL P42	S71914CE/P4A GA	VEB70 /S 7CE1 UL
75	105	16	2MMV9315HX VV SUL	75BNC19TRV1VLP3	HSS71915C.T.P4S.UL	ZSB1915HCRRUL	2LA-HSE915C LLB G/GL P42	S71915CE/P4A GA	VEB75 /S 7CE1 UL
80	110	16	2MMV9316HX VV SUL	80BNC19TRV1VLP3	HSS71916C.T.P4S.UL	ZSB1916HCRRUL	2LA-HSE916C LLB G/GL P42	S71916CE/P4A GA	VEB80 /S 7CE1 UL
85	120	18	2MMV9317HX VV SUL	85BNC19TRV1VLP3	HSS71917C.T.P4S.UL	ZSB1917HCRRUL	2LA-HSE917C LLB G/GL P42	S71917CE/P4A GA	VEB85 /S 7CE1 UL
90	125	18	2MMV9318HX VV SUL	90BNC19TRV1VLP3	HSS71918C.T.P4S.UL	ZSB1918HCRRUL	2LA-HSE918C LLB G/GL P42	S71918CE/P4A GA	VEB90 /S 7CE1 UL
95	130	18	2MMV9319HX VV SUL	95BNC19TRV1VLP3	HSS71919C.T.P4S.UL	ZSB1919HCRRUL	2LA-HSE919C LLB G/GL P42	S71919CE/P4A GA	VEB95 /S 7CE1 UL
100	140	20	2MMV9320HX VV SUL	100BNC19TRV1VLP3	HSS71920C.T.P4S.UL	ZSB1920HCRRUL	2LA-HSE920C LLB G/GL P42	S71920CE/P4A GA	VEB100 /S 7CE1 UL
110	150	20	2MMV9322HX VV SUL	110BNC19TRV1VLP3	HSS71922C.T.P4S.UL	ZSB1922HCRRUL	2LA-HSE922C LLB G/GL P42	S71922CE/P4A GA	VEB110 /S 7CE1 UL
120	165	22	2MMV9324HX VV SUL	120BNC19TRV1VLP3	HSS71924C.T.P4S.UL		2LA-HSE924C LLB G/GL P42	S71924CE/P4A GA	VEB120 /S 7CE1 UL
130	180	24	2MMV9326HX VV SUL	130BNC19TRV1VLP3	HSS71926C.T.P4S.UL		2LA-HSE926C LLB G/GL P42	S71926CE/P4A GA	VEB130 /S 7CE1 UL
140	190	24	2MMV9328HX VV SUL	140BNC19TRV1VLP3			2LA-HSE928C LLB G/GL P42	S71928CE/P4A GA	VEB140 /S 7CE1 UL
150	210	28	2MMV9330HX VV SUL	150BNC19TRV1VLP3			2LA-HSE930C LLB G/GL P42	S71930CE/P4A GA	VEB150 /S 7CE1 UL

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Timken Machine Tool

High Speed Spindle Bearing Interchange List



ISO 19 Series with a 15 deg Contact Angle and Ceramic Balls

Bore (mm)	O.D. (mm)	Width (mm)	Timken	NSK	FAG	Barден	NTN	SKF	SNFA
10	22	6	2MMVC9300HX VV SUL		HCS71900C.T.P4S.UL	CZSB1900HCRRUL		S71900CE/HCP4A GA	VEB10 /S/NS 7CE1 UL
12	24	6	2MMVC9301HX VV SUL		HCS71901C.T.P4S.UL	CZSB1901HCRRUL		S71901CE/HCP4A GA	VEB12 /S/NS 7CE1 UL
15	28	7	2MMVC9302HX VV SUL		HCS71902C.T.P4S.UL	CZSB1902HCRRUL		S71902CE/HCP4A GA	VEB15 /S/NS 7CE1 UL
17	30	7	2MMVC9303HX VV SUL		HCS71903C.T.P4S.UL	CZSB1903HCRRUL		S71903CE/HCP4A GA	VEB17 /S/NS 7CE1 UL
20	37	9	2MMVC9304HX VV SUL		HCS71904C.T.P4S.UL	CZSB1904HCRRUL		S71904CE/HCP4A GA	VEB20 /S/NS 7CE1 UL
25	42	9	2MMVC9305HX VV SUL		HCS71905C.T.P4S.UL	CZSB1905HCRRUL		S71905CE/HCP4A GA	VEB25 /S/NS 7CE1 UL
30	47	9	2MMVC9306HX VV SUL		HCS71906C.T.P4S.UL	CZSB1906HCRRUL		S71906CE/HCP4A GA	VEB30 /S/NS 7CE1 UL
35	55	10	2MMVC9307HX VV SUL	35BNC19SN24TRV1VLP3	HCS71907C.T.P4S.UL	CZSB1907HCRRUL		S71907CE/HCP4A GA	VEB35 /S/NS 7CE1 UL
40	62	12	2MMVC9308HX VV SUL	40BNC19SN24TRV1VLP3	HCS71908C.T.P4S.UL	CZSB1908HCRRUL		S71908CE/HCP4A GA	VEB40 /S/NS 7CE1 UL
45	68	12	2MMVC9309HX VV SUL	45BNC19SN24TRV1VLP3	HCS71909C.T.P4S.UL	CZSB1909HCRRUL		S71909CE/HCP4A GA	VEB45 /S/NS 7CE1 UL
50	72	12	2MMVC9310HX VV SUL	50BNC19SN24TRV1VLP3	HCS71910C.T.P4S.UL	CZSB1910HCRRUL	5S-2LA-HSE910C LLB G/GL P42	S71910CE/HCP4A GA	VEB50 /S/NS 7CE1 UL
55	80	13	2MMVC9311HX VV SUL	55BNC19SN24TRV1VLP3	HCS71911C.T.P4S.UL	CZSB1911HCRRUL	5S-2LA-HSE911C LLB G/GL P42	S71911CE/HCP4A GA	VEB55 /S/NS 7CE1 UL
60	85	13	2MMVC9312HX VV SUL	60BNC19SN24TRV1VLP3	HCS71912C.T.P4S.UL	CZSB1912HCRRUL	5S-2LA-HSE912C LLB G/GL P42	S71912CE/HCP4A GA	VEB60 /S/NS 7CE1 UL
65	90	13	2MMVC9313HX VV SUL	65BNC19SN24TRV1VLP3	HCS71913C.T.P4S.UL	CZSB1913HCRRUL	5S-2LA-HSE913C LLB G/GL P42	S71913CE/HCP4A GA	VEB65 /S/NS 7CE1 UL
70	100	16	2MMVC9314HX VV SUL	70BNC19SN24TRV1VLP3	HCS71914C.T.P4S.UL	CZSB1914HCRRUL	5S-2LA-HSE914C LLB G/GL P42	S71914CE/HCP4A GA	VEB70 /S/NS 7CE1 UL
75	105	16	2MMVC9315HX VV SUL	75BNC19SN24TRV1VLP3	HCS71915C.T.P4S.UL	CZSB1915HCRRUL	5S-2LA-HSE915C LLB G/GL P42	S71915CE/HCP4A GA	VEB75 /S/NS 7CE1 UL
80	110	16	2MMVC9316HX VV SUL	80BNC19SN24TRV1VLP3	HCS71916C.T.P4S.UL	CZSB1916HCRRUL	5S-2LA-HSE916C LLB G/GL P42	S71916CE/HCP4A GA	VEB80 /S/NS 7CE1 UL
85	120	18	2MMVC9317HX VV SUL	85BNC19SN24TRV1VLP3	HCS71917C.T.P4S.UL	CZSB1917HCRRUL	5S-2LA-HSE917C LLB G/GL P42	S71917CE/HCP4A GA	VEB85 /S/NS 7CE1 UL
90	125	18	2MMVC9318HX VV SUL	90BNC19SN24TRV1VLP3	HCS71918C.T.P4S.UL	CZSB1918HCRRUL	5S-2LA-HSE918C LLB G/GL P42	S71918CE/HCP4A GA	VEB90 /S/NS 7CE1 UL
95	130	18	2MMVC9319HX VV SUL	95BNC19SN24TRV1VLP3	HCS71919C.T.P4S.UL	CZSB1919HCRRUL	5S-2LA-HSE919C LLB G/GL P42	S71919CE/HCP4A GA	VEB95 /S/NS 7CE1 UL
100	140	20	2MMVC9320HX VV SUL	100BNC1SN249TRV1VLP3	HCS71920C.T.P4S.UL	CZSB1920HCRRUL	5S-2LA-HSE920C LLB G/GL P42	S71920CE/HCP4A GA	VEB100 /S/NS 7CE1 UL
110	150	20	2MMVC9322HX VV SUL	110BNC1SN249TRV1VLP3	HCS71922C.T.P4S.UL	CZSB1922HCRRUL	5S-2LA-HSE922C LLB G/GL P42	S71922CE/HCP4A GA	VEB110 /S/NS 7CE1 UL
120	165	22	2MMVC9324HX VV SUL	120BNC1SN249TRV1VLP3	HCS71924C.T.P4S.UL		5S-2LA-HSE924C LLB G/GL P42	S71924CE/HCP4A GA	VEB120 /S/NS 7CE1 UL
130	180	24	2MMVC9326HX VV SUL	130BNC1SN249TRV1VLP3	HCS71926C.T.P4S.UL		5S-2LA-HSE926C LLB G/GL P42	S71926CE/HCP4A GA	VEB130 /S/NS 7CE1 UL
140	190	24	2MMVC9328HX VV SUL	140BNC1SN249TRV1VLP3			5S-2LA-HSE928C LLB G/GL P42	S71928CE/HCP4A GA	VEB140 /S/NS 7CE1 UL
150	210	28	2MMVC9330HX VV SUL	150BNC1SN249TRV1VLP3			5S-2LA-HSE930C LLB G/GL P42	S71930CE/HCP4A GA	VEB150 /S/NS 7CE1 UL

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High Speed Spindle Bearing Interchange List



ISO 19 Series with a 25 deg Contact Angle and Steel Balls

ISO 19 Series with a 25 deg Contact Angle and Ceramic Balls

Bore (mm)	O.D. (mm)	Width (mm)	Timken	NSK	FAG	Barden	NTN	SKF	SNFA
10	22	6	3MMV9300HX VV SUL		HSS71900E.T.P4S.UL	ZSB1900HERRUL		S71900ACE/P4A GA	VEB10 /S 7CE3 UL
12	24	6	3MMV9301HX VV SUL		HSS71901E.T.P4S.UL	ZSB1901HERRUL		S71901ACE/P4A GA	VEB12 /S 7CE3 UL
15	28	7	3MMV9302HX VV SUL		HSS71902E.T.P4S.UL	ZSB1902HERRUL		S71902ACE/P4A GA	VEB15 /S 7CE3 UL
17	30	7	3MMV9303HX VV SUL		HSS71903E.T.P4S.UL	ZSB1903HERRUL		S71903ACE/P4A GA	VEB17 /S 7CE3 UL
20	37	9	3MMV9304HX VV SUL		HSS71904E.T.P4S.UL	ZSB1904HERRUL		S71904ACE/P4A GA	VEB20 /S 7CE3 UL
25	42	9	3MMV9305HX VV SUL		HSS71905E.T.P4S.UL	ZSB1905HERRUL		S71905ACE/P4A GA	VEB25 /S 7CE3 UL
30	47	9	3MMV9306HX VV SUL		HSS71906E.T.P4S.UL	ZSB1906HERRUL		S71906ACE/P4A GA	VEB30 /S 7CE3 UL
35	55	10	3MMV9307HX VV SUL		HSS71907E.T.P4S.UL	ZSB1907HERRUL		S71907ACE/P4A GA	VEB35 /S 7CE3 UL
40	62	12	3MMV9308HX VV SUL		HSS71908E.T.P4S.UL	ZSB1908HERRUL		S71908ACE/P4A GA	VEB40 /S 7CE3 UL
45	68	12	3MMV9309HX VV SUL		HSS71909E.T.P4S.UL	ZSB1909HERRUL		S71909ACE/P4A GA	VEB45 /S 7CE3 UL
50	72	12	3MMV9310HX VV SUL		HSS71910E.T.P4S.UL	ZSB1910HERRUL	2LA-HSE910AD LLB G/GL P42	S71910ACE/P4A GA	VEB50 /S 7CE3 UL
55	80	13	3MMV9311HX VV SUL		HSS71911E.T.P4S.UL	ZSB1911HERRUL	2LA-HSE911AD LLB G/GL P42	S71911ACE/P4A GA	VEB55 /S 7CE3 UL
60	85	13	3MMV9312HX VV SUL		HSS71912E.T.P4S.UL	ZSB1912HERRUL	2LA-HSE912AD LLB G/GL P42	S71912ACE/P4A GA	VEB60 /S 7CE3 UL
65	90	13	3MMV9313HX VV SUL		HSS71913E.T.P4S.UL	ZSB1913HERRUL	2LA-HSE913AD LLB G/GL P42	S71913ACE/P4A GA	VEB65 /S 7CE3 UL
70	100	16	3MMV9314HX VV SUL		HSS71914E.T.P4S.UL	ZSB1914HERRUL	2LA-HSE914AD LLB G/GL P42	S71914ACE/P4A GA	VEB70 /S 7CE3 UL
75	105	16	3MMV9315HX VV SUL		HSS71915E.T.P4S.UL	ZSB1915HERRUL	2LA-HSE915AD LLB G/GL P42	S71915ACE/P4A GA	VEB75 /S 7CE3 UL
80	110	16	3MMV9316HX VV SUL		HSS71916E.T.P4S.UL	ZSB1916HERRUL	2LA-HSE916AD LLB G/GL P42	S71916ACE/P4A GA	VEB80 /S 7CE3 UL
85	120	18	3MMV9317HX VV SUL		HSS71917E.T.P4S.UL	ZSB1917HERRUL	2LA-HSE917AD LLB G/GL P42	S71917ACE/P4A GA	VEB85 /S 7CE3 UL
90	125	18	3MMV9318HX VV SUL		HSS71918E.T.P4S.UL	ZSB1918HERRUL	2LA-HSE918AD LLB G/GL P42	S71918ACE/P4A GA	VEB90 /S 7CE3 UL
95	130	18	3MMV9319HX VV SUL		HSS71919E.T.P4S.UL	ZSB1919HERRUL	2LA-HSE919AD LLB G/GL P42	S71919ACE/P4A GA	VEB95 /S 7CE3 UL
100	140	20	3MMV9320HX VV SUL		HSS71920E.T.P4S.UL	ZSB1920HERRUL	2LA-HSE920AD LLB G/GL P42	S71920ACE/P4A GA	VEB100 /S 7CE3 UL
110	150	20	3MMV9322HX VV SUL		HSS71922E.T.P4S.UL	ZSB1922HERRUL	2LA-HSE922AD LLB G/GL P42	S71922ACE/P4A GA	VEB110 /S 7CE3 UL
120	165	22	3MMV9324HX VV SUL		HSS71924E.T.P4S.UL		2LA-HSE924AD LLB G/GL P42	S71924ACE/P4A GA	VEB120 /S 7CE3 UL
130	180	24	3MMV9326HX VV SUL		HSS71926E.T.P4S.UL		2LA-HSE926AD LLB G/GL P42	S71926ACE/P4A GA	VEB130 /S 7CE3 UL
140	190	24	3MMV9328HX VV SUL				2LA-HSE928AD LLB G/GL P42	S71928ACE/P4A GA	VEB140 /S 7CE3 UL
150	210	28	3MMV9330HX VV SUL				2LA-HSE930AD LLB G/GL P42	S71930ACE/P4A GA	VEB150 /S 7CE3 UL
10	22	6	3MMVC9300HX VV SUL		HCS71900E.T.P4S.UL	CZSB1900HERRUL		S71900ACE/HCP4A GA	VEB10 /S/NS 7CE3 UL
12	24	6	3MMVC9301HX VV SUL		HCS71901E.T.P4S.UL	CZSB1901HERRUL		S71901ACE/HCP4A GA	VEB12 /S/NS 7CE3 UL
15	28	7	3MMVC9302HX VV SUL		HCS71902E.T.P4S.UL	CZSB1902HERRUL		S71902ACE/HCP4A GA	VEB15 /S/NS 7CE3 UL
17	30	7	3MMVC9303HX VV SUL		HCS71903E.T.P4S.UL	CZSB1903HERRUL		S71903ACE/HCP4A GA	VEB17 /S/NS 7CE3 UL
20	37	9	3MMVC9304HX VV SUL		HCS71904E.T.P4S.UL	CZSB1904HERRUL		S71904ACE/HCP4A GA	VEB20 /S/NS 7CE3 UL
25	42	9	3MMVC9305HX VV SUL		HCS71905E.T.P4S.UL	CZSB1905HERRUL		S71905ACE/HCP4A GA	VEB25 /S/NS 7CE3 UL
30	47	9	3MMVC9306HX VV SUL		HCS71906E.T.P4S.UL	CZSB1906HERRUL		S71906ACE/HCP4A GA	VEB30 /S/NS 7CE3 UL
35	55	10	3MMVC9307HX VV SUL		HCS71907E.T.P4S.UL	CZSB1907HERRUL		S71907ACE/HCP4A GA	VEB35 /S/NS 7CE3 UL
40	62	12	3MMVC9308HX VV SUL		HCS71908E.T.P4S.UL	CZSB1908HERRUL		S71908ACE/HCP4A GA	VEB40 /S/NS 7CE3 UL
45	68	12	3MMVC9309HX VV SUL		HCS71909E.T.P4S.UL	CZSB1909HERRUL		S71909ACE/HCP4A GA	VEB45 /S/NS 7CE3 UL
50	72	12	3MMVC9310HX VV SUL		HCS71910E.T.P4S.UL	CZSB1910HERRUL	5S-2LA-HSE910AD LLB G/GL P42	S71910ACE/HCP4A GA	VEB50 /S/NS 7CE3 UL
55	80	13	3MMVC9311HX VV SUL		HCS71911E.T.P4S.UL	CZSB1911HERRUL	5S-2LA-HSE911AD LLB G/GL P42	S71911ACE/HCP4A GA	VEB55 /S/NS 7CE3 UL
60	85	13	3MMVC9312HX VV SUL		HCS71912E.T.P4S.UL	CZSB1912HERRUL	5S-2LA-HSE912AD LLB G/GL P42	S71912ACE/HCP4A GA	VEB60 /S/NS 7CE3 UL
65	90	13	3MMVC9313HX VV SUL		HCS71913E.T.P4S.UL	CZSB1913HERRUL	5S-2LA-HSE913AD LLB G/GL P42	S71913ACE/HCP4A GA	VEB65 /S/NS 7CE3 UL
70	100	16	3MMVC9314HX VV SUL		HCS71914E.T.P4S.UL	CZSB1914HERRUL	5S-2LA-HSE914AD LLB G/GL P42	S71914ACE/HCP4A GA	VEB70 /S/NS 7CE3 UL
75	105	16	3MMVC9315HX VV SUL		HCS71915E.T.P4S.UL	CZSB1915HERRUL	5S-2LA-HSE915AD LLB G/GL P42	S71915ACE/HCP4A GA	VEB75 /S/NS 7CE3 UL
80	110	16	3MMVC9316HX VV SUL		HCS71916E.T.P4S.UL	CZSB1916HERRUL	5S-2LA-HSE916AD LLB G/GL P42	S71916ACE/HCP4A GA	VEB80 /S/NS 7CE3 UL
85	120	18	3MMVC9317HX VV SUL		HCS71917E.T.P4S.UL	CZSB1917HERRUL	5S-2LA-HSE917AD LLB G/GL P42	S71917ACE/HCP4A GA	VEB85 /S/NS 7CE3 UL
90	125	18	3MMVC9318HX VV SUL		HCS71918E.T.P4S.UL	CZSB1918HERRUL	5S-2LA-HSE918AD LLB G/GL P42	S71918ACE/HCP4A GA	VEB90 /S/NS 7CE3 UL
95	130	18	3MMVC9319HX VV SUL		HCS71919E.T.P4S.UL	CZSB1919HERRUL	5S-2LA-HSE919AD LLB G/GL P42	S71919ACE/HCP4A GA	VEB95 /S/NS 7CE3 UL
100	140	20	3MMVC9320HX VV SUL		HCS71920E.T.P4S.UL	CZSB1920HERRUL	5S-2LA-HSE920AD LLB G/GL P42	S71920ACE/HCP4A GA	VEB100 /S/NS 7CE3 UL
110	150	20	3MMVC9322HX VV SUL		HCS71922E.T.P4S.UL	CZSB1922HERRUL	5S-2LA-HSE922AD LLB G/GL P42	S71922ACE/HCP4A GA	VEB110 /S/NS 7CE3 UL
120	165	22	3MMVC9324HX VV SUL		HCS71924E.T.P4S.UL		5S-2LA-HSE924AD LLB G/GL P42	S71924ACE/HCP4A GA	VEB120 /S/NS 7CE3 UL
130	180	24	3MMVC9326HX VV SUL		HCS71926E.T.P4S.UL		5S-2LA-HSE926AD LLB G/GL P42	S71926ACE/HCP4A GA	VEB130 /S/NS 7CE3 UL
140	190	24	3MMVC9328HX VV SUL				5S-2LA-HSE928AD LLB G/GL P42	S71928ACE/HCP4A GA	VEB140 /S/NS 7CE3 UL
150	210	28	3MMVC9330HX VV SUL				5S-2LA-HSE930AD LLB G/GL P42	S71930ACE/HCP4A GA	VEB150 /S/NS 7CE3 UL

TIMKEN

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High Speed Spindle Bearing Interchange List



Nomenclature

Timken	NSK	FAG	Barden	NTN	SKF	SNFA
Ring Material E - WearEver Steel rings & ceramic balls (drop the C and the CR from the part number) <blank> 52100 through hardened & heat stabilized to 400°F Contact Angle 2 prefix - 15° 3 prefix - 25° 4 prefix - 18° Precision Class MM/MMV super high precision between ABEC-7 (ISO P4) and ABEC-9 (ISO P2) MMX ultra precision. ABEC-9 (ISO P2) Series 91 ISO 10 dimensional series (9100 extra light) 93 ISO 19 dimensional series (9300 ultra light) Bore Code <nn> 04 and up multiply by 5 to get the bore in millimeters (00=10mm, 01=12mm, 02=15mm, 03=17mm). Construction HX internal geometry is optimized for speed. Cage Material CR Phenolic cage Sealing VV high speed seals both sides, greased for life (drop the CR from the part number) Bearings Set Quantity S single bearing D duplex pair of bearings T triplex set of bearings Q quadruplex set of bearings Sets U universally ground Preload Level X Extra Light L Light M Medium H Heavy	Bearing Bore <nnn> bearing bore (mm) Bearing Type BNC 15° contact angle (small ball series) BNR 18° contact angle (robust series) BGR 15° contact angle (robust grinding series) Dimension Series 10 ISO 10 Series 19 ISO 19 Series Material Symbol <blank> steel ball (BNC bearing type only) SN24 ceramic ball (BNC bearing type only) X SHX steel rings and ceramic balls (BNR & BGR bearing types) S steel balls (BNR & BGR bearing types) H ceramic balls (BNR & BGR bearing types) Cage Symbol TYN Polyamide TR Phenolic Arrangement Symbol DB back-to-back arrangement DTR tandem DBB four row arrangement Preload Symbol EL extra light L light CP preload, negative clearance (CP10 = -10µm) CA axial clearance (CA10 = +10µm) Precision/Tolerance Class P4 ISO Class 4 (ABEC7) P4Y Special ID/OD tighter tolerancing for set matching P3 Dimensions are ISO class 4, running accuracy ISO class 2 P2 ISO Class 2 (ABEC9)	Bearing Type HS High speed bearing, steel balls. HSS High speed bearing, steel balls, sealed. HC High speed bearing, ceramic balls. HCS High speed bearing, ceramic balls, sealed. XC X-life (Cronidur 30) ultra high speed bearing, ceramic balls. XCS X-life (Cronidur 30) ultra high speed bearing, ceramic balls, sealed. Series 70 ISO 10 dimensional series (medium series) 719 ISO 19 dimensional series (lightweight series) Bore Code <nn> 04 and up multiply by 5 to get the bore in millimeters (00=10mm, 01=12mm, 02=15mm, 03=17mm). Contact Angle C - 15° E - 25° Seals RR seals at both sides and greased for life Bearing Arrangement P4S ABEC 7 nominal tolerances, ABEC 9 running accuracies Bearing Arrangement U universally ground, single bearing, any arrangement DU set of two universal bearings TU set of three universal bearings QU set of four universal bearings PU set of five universal bearings DB set of two bearings, back-to-back DF set of two bearings, face-to-face DT set of two bearings, tandem TBT set of three bearings, tandem-O-arrangement QBC set of four bearings, tandem-O-tandem arrangement Preload Level L Light M Medium H Heavy	Bearing Type ZSB High speed bearing, steel balls. CZSB Hybrid high speed bearing, ceramic balls. XCZSB X-life (Cronidur 30) ultra high speed bearing, ceramic balls. Series 100 ISO 10 dimensional series (medium series) 1900 ISO 19 dimensional series (lightweight series) Bore Code <nn> 04 and up multiply by 5 to get the bore in millimeters (00=10mm, 01=12mm, 02=15mm, 03=17mm). Cage Material H Textile laminated Phenolic resin cage, outer ring piloted Contact Angle C - 15° E - 25° Seals RR seals at both sides and greased for life Bearing Arrangement U universally ground, single bearing, any arrangement DU set of two universal bearings TU set of three universal bearings QU set of four universal bearings PU set of five universal bearings DB set of two bearings, back-to-back DF set of two bearings, face-to-face DT set of two bearings, tandem TBT set of three bearings, tandem-O-arrangement QBC set of four bearings, tandem-O-tandem arrangement Preload Level L Light M Medium H Heavy	Material Code 5S ceramic rolling element. <blank> steel balls Bearing Type HSB super high-speed angular contact Series 0 ISO 10 dimensional series 9 ISO 19 dimensional series Bore Code <nn> 04 and up multiply by 5 to get the bore in millimeters (00=10mm, 01=12mm, 02=15mm, 03=17mm). Cage Material T1 Phenolic T2 Plastic molded L1 Machined brass Contact Angle C - 15° B - 40° <blank> 30° Mounting Configuration G single universal flush ground (can be mounted in any configuration) GD2 pair of universal DB duplex - back-to-back DF duplex - face-to-face DT duplex tandem DBF, DFT, DTT triplex set DBTT, DFTT, DTBT, DTFT quad set Preload GL light GN normal GM medium GH heavy Precision/Tolerance Class P4 ISO Class 4 (ABEC7) P2 ISO Class 2 (ABEC9)	Features S Sealed bearing (B internal design only) C Ceramic balls (B internal design only) Bearing Series 70 ISO dimensional series 10 719 ISO dimensional series 19 Bore Code 04 x 5 = 20mm bore diameter 30 x 5 = 150mm bore diameter Contact Angle C - 15° F - 18° (B internal design only) D - 25° (B internal design only) AC - 25° (E internal design only) Internal Design B - High speed sealed design E - High speed design Cage Material <blank> Outer ring land riding, fabric reinforced Phenolic resin. Material Symbol <blank> steel ball HC ceramic balls (E internal design only) Tolerance Class PA4, P7 dimensional accuracy to ISO class 4, running accuracy better than ISO class 4 PA9A, P9 accuracy to ABMA class ABEC 9 Number of Bearings in Set D 2 bearings in matched set T 3 bearings in matched set Q 4 bearings in matched set Bearing arrangement in Matched Set B Back-to-back F Face-to-face T Tandem BT Back-to-back/tandem FT Face-to-face/tandem BC Back-to-back of pairs in tandem FC Face-to-face of pairs in tandem G For universal pairing Preload A Light preload B Medium preload C Heavy preload G... Special preload, e.g. G240	Form VE High speed internal geometry Bearing Series X ISO dimensional series 10 B ISO dimensional series 19 Bearing Bore <nnn> bearing bore (mm) Special Characteristic /NS ceramic balls Precision 7 ABEC 7 9 ABEC 9 Cage Material CE Outer ring land riding, fabric reinforced Phenolic resin Contact Angle 0 - 12° 1 - 15° 2 - 18° 3 - 25° Pairing set U Universal DU Duplex Universal TU Triplex Universal DD Back-to-back mounting FF Face-to-face mounting T Tandem TD Tandem/back-to-back TDT Tandem/back-to-back/tandem 3TD Tandem/tandem/back-to-back Preload L Light preload M Medium preload F Heavy preload

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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, gears, chain and related mechanical power transmission products and services.

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Timken Machine Tool

High Speed Spindle Sealed Bearing Interchange List



ISO 10 Series with a 15 deg Contact Angle and Steel Balls

ISO 10 Series with a 15 deg Contact Angle and Ceramic Balls

Bore (mm)	O.D. (mm)	Width (mm)	Timken	NSK	FAG	Barден	NTN	SKF	SNFA
10	26	8	2MMV9100HX VV SUL		HSS7000C.T.P4S.UL	ZSB100HCRRUL		S7000CE/P4A GA	VEX10 /S 7CE1 UL
12	28	8	2MMV9101HX VV SUL		HSS7001C.T.P4S.UL	ZSB101HCRRUL		S7001CE/P4A GA	VEX12 /S 7CE1 UL
15	32	9	2MMV9102HX VV SUL		HSS7002C.T.P4S.UL	ZSB102HCRRUL		S7002CE/P4A GA	VEX15 /S 7CE1 UL
17	35	10	2MMV9103HX VV SUL		HSS7003C.T.P4S.UL	ZSB103HCRRUL		S7003CE/P4A GA	VEX17 /S 7CE1 UL
20	42	12	2MMV9104HX VV SUL		HSS7004C.T.P4S.UL	ZSB104HCRRUL		S7004CE/P4A GA	VEX20 /S 7CE1 UL
25	47	12	2MMV9105HX VV SUL		HSS7005C.T.P4S.UL	ZSB105HCRRUL		S7005CE/P4A GA	VEX25 /S 7CE1 UL
30	55	13	2MMV9106HX VV SUL	30BNC10TRV1VLP3	HSS7006C.T.P4S.UL	ZSB106HCRRUL		S7006CE/P4A GA	VEX30 /S 7CE1 UL
35	62	14	2MMV9107HX VV SUL	35BNC10TRV1VLP3	HSS7007C.T.P4S.UL	ZSB107HCRRUL		S7007CE/P4A GA	VEX35 /S 7CE1 UL
40	68	15	2MMV9108HX VV SUL	40BNC10TRV1VLP3	HSS7008C.T.P4S.UL	ZSB108HCRRUL		S7008CE/P4A GA	VEX40 /S 7CE1 UL
45	75	16	2MMV9109HX VV SUL	45BNC10TRV1VLP3	HSS7009C.T.P4S.UL	ZSB109HCRRUL		S7009CE/P4A GA	VEX45 /S 7CE1 UL
50	80	16	2MMV9110HX VV SUL	50BNC10TRV1VLP3	HSS7010C.T.P4S.UL	ZSB110HCRRUL	2LA-HSE010C LLB G/GL P42	S7010CE/P4A GA	VEX50 /S 7CE1 UL
55	90	18	2MMV9111HX VV SUL	55BNC10TRV1VLP3	HSS7011C.T.P4S.UL	ZSB111HCRRUL	2LA-HSE011C LLB G/GL P42	S7011CE/P4A GA	VEX55 /S 7CE1 UL
60	95	18	2MMV9112HX VV SUL	60BNC10TRV1VLP3	HSS7012C.T.P4S.UL	ZSB112HCRRUL	2LA-HSE012C LLB G/GL P42	S7012CE/P4A GA	VEX60 /S 7CE1 UL
65	100	18	2MMV9113HX VV SUL	65BNC10TRV1VLP3	HSS7013C.T.P4S.UL	ZSB113HCRRUL	2LA-HSE013C LLB G/GL P42	S7013CE/P4A GA	VEX65 /S 7CE1 UL
70	110	20	2MMV9114HX VV SUL	70BNC10TRV1VLP3	HSS7014C.T.P4S.UL	ZSB114HCRRUL	2LA-HSE014C LLB G/GL P42	S7014CE/P4A GA	VEX70 /S 7CE1 UL
75	115	20	2MMV9115HX VV SUL	75BNC10TRV1VLP3	HSS7015C.T.P4S.UL	ZSB115HCRRUL	2LA-HSE015C LLB G/GL P42	S7015CE/P4A GA	VEX75 /S 7CE1 UL
80	125	22	2MMV9116HX VV SUL	80BNC10TRV1VLP3	HSS7016C.T.P4S.UL	ZSB116HCRRUL	2LA-HSE016C LLB G/GL P42	S7016CE/P4A GA	VEX80 /S 7CE1 UL
85	130	22	2MMV9117HX VV SUL	85BNC10TRV1VLP3	HSS7017C.T.P4S.UL	ZSB117HCRRUL	2LA-HSE017C LLB G/GL P42	S7017CE/P4A GA	VEX85 /S 7CE1 UL
90	140	24	2MMV9118HX VV SUL	90BNC10TRV1VLP3	HSS7018C.T.P4S.UL	ZSB118HCRRUL	2LA-HSE018C LLB G/GL P42	S7018CE/P4A GA	VEX90 /S 7CE1 UL
95	145	24	2MMV9119HX VV SUL	95BNC10TRV1VLP3	HSS7019C.T.P4S.UL	ZSB119HCRRUL	2LA-HSE019C LLB G/GL P42	S7019CE/P4A GA	VEX95 /S 7CE1 UL
100	150	24	2MMV9120HX VV SUL	100BNC10TRV1VLP3	HSS7020C.T.P4S.UL	ZSB120HCRRUL	2LA-HSE020C LLB G/GL P42	S7020CE/P4A GA	VEX100 /S 7CE1 UL
105	160	26	2MMV9121HX VV SUL	105BNC10TRV1VLP3	HSS7021C.T.P4S.UL	ZSB121HCRRUL	2LA-HSE021C LLB G/GL P42	S7021CE/P4A GA	VEX105 /S 7CE1 UL
110	170	28	2MMV9122HX VV SUL	110BNC10TRV1VLP3	HSS7022C.T.P4S.UL	ZSB122HCRRUL	2LA-HSE022C LLB G/GL P42	S7022CE/P4A GA	VEX110 /S 7CE1 UL
120	180	28	2MMV9124HX VV SUL	120BNC10TRV1VLP3	HSS7024C.T.P4S.UL	ZSB124HCRRUL	2LA-HSE024C LLB G/GL P42	S7024CE/P4A GA	VEX120 /S 7CE1 UL
10	26	8	2MMVC9100HX VV SUL		HCS7000C.T.P4S.UL	CZSB100HCRRUL		S7000CE/HCP4A GA	VEX10 /S/NS 7CE1 UL
12	28	8	2MMVC9101HX VV SUL		HCS7001C.T.P4S.UL	CZSB101HCRRUL		S7001CE/HCP4A GA	VEX12 /S/NS 7CE1 UL
15	32	9	2MMVC9102HX VV SUL		HCS7002C.T.P4S.UL	CZSB102HCRRUL		S7002CE/HCP4A GA	VEX15 /S/NS 7CE1 UL
17	35	10	2MMVC9103HX VV SUL		HCS7003C.T.P4S.UL	CZSB103HCRRUL		S7003CE/HCP4A GA	VEX17 /S/NS 7CE1 UL
20	42	12	2MMVC9104HX VV SUL		HCS7004C.T.P4S.UL	CZSB104HCRRUL		S7004CE/HCP4A GA	VEX20 /S/NS 7CE1 UL
25	47	12	2MMVC9105HX VV SUL		HCS7005C.T.P4S.UL	CZSB105HCRRUL		S7005CE/HCP4A GA	VEX25 /S/NS 7CE1 UL
30	55	13	2MMVC9106HX VV SUL	30BNC10SN24TRV1VLP3	HCS7006C.T.P4S.UL	CZSB106HCRRUL		S7006CE/HCP4A GA	VEX30 /S/NS 7CE1 UL
35	62	14	2MMVC9107HX VV SUL	35BNC10SN24TRV1VLP3	HCS7007C.T.P4S.UL	CZSB107HCRRUL		S7007CE/HCP4A GA	VEX35 /S/NS 7CE1 UL
40	68	15	2MMVC9108HX VV SUL	40BNC10SN24TRV1VLP3	HCS7008C.T.P4S.UL	CZSB108HCRRUL		S7008CE/HCP4A GA	VEX40 /S/NS 7CE1 UL
45	75	16	2MMVC9109HX VV SUL	45BNC10SN24TRV1VLP3	HCS7009C.T.P4S.UL	CZSB109HCRRUL		S7009CE/HCP4A GA	VEX45 /S/NS 7CE1 UL
50	80	16	2MMVC9110HX VV SUL	50BNC10SN24TRV1VLP3	HCS7010C.T.P4S.UL	CZSB110HCRRUL	5S-2LA-HSE010C LLB G/GL P42	S7010CE/HCP4A GA	VEX50 /S/NS 7CE1 UL
55	90	18	2MMVC9111HX VV SUL	55BNC10SN24TRV1VLP3	HCS7011C.T.P4S.UL	CZSB111HCRRUL	5S-2LA-HSE011C LLB G/GL P42	S7011CE/HCP4A GA	VEX55 /S/NS 7CE1 UL
60	95	18	2MMVC9112HX VV SUL	60BNC10SN24TRV1VLP3	HCS7012C.T.P4S.UL	CZSB112HCRRUL	5S-2LA-HSE012C LLB G/GL P42	S7012CE/HCP4A GA	VEX60 /S/NS 7CE1 UL
65	100	18	2MMVC9113HX VV SUL	65BNC10SN24TRV1VLP3	HCS7013C.T.P4S.UL	CZSB113HCRRUL	5S-2LA-HSE013C LLB G/GL P42	S7013CE/HCP4A GA	VEX65 /S/NS 7CE1 UL
70	110	20	2MMVC9114HX VV SUL	70BNC10SN24TRV1VLP3	HCS7014C.T.P4S.UL	CZSB114HCRRUL	5S-2LA-HSE014C LLB G/GL P42	S7014CE/HCP4A GA	VEX70 /S/NS 7CE1 UL
75	115	20	2MMVC9115HX VV SUL	75BNC10SN24TRV1VLP3	HCS7015C.T.P4S.UL	CZSB115HCRRUL	5S-2LA-HSE015C LLB G/GL P42	S7015CE/HCP4A GA	VEX75 /S/NS 7CE1 UL
80	125	22	2MMVC9116HX VV SUL	80BNC10SN24TRV1VLP3	HCS7016C.T.P4S.UL	CZSB116HCRRUL	5S-2LA-HSE016C LLB G/GL P42	S7016CE/HCP4A GA	VEX80 /S/NS 7CE1 UL
85	130	22	2MMVC9117HX VV SUL	85BNC10SN24TRV1VLP3	HCS7017C.T.P4S.UL	CZSB117HCRRUL	5S-2LA-HSE017C LLB G/GL P42	S7017CE/HCP4A GA	VEX85 /S/NS 7CE1 UL
90	140	24	2MMVC9118HX VV SUL	90BNC10SN24TRV1VLP3	HCS7018C.T.P4S.UL	CZSB118HCRRUL	5S-2LA-HSE018C LLB G/GL P42	S7018CE/HCP4A GA	VEX90 /S/NS 7CE1 UL
95	145	24	2MMVC9119HX VV SUL	95BNC10SN24TRV1VLP3	HCS7019C.T.P4S.UL	CZSB119HCRRUL	5S-2LA-HSE019C LLB G/GL P42	S7019CE/HCP4A GA	VEX95 /S/NS 7CE1 UL
100	150	24	2MMVC9120HX VV SUL	100BNC10SN24TRV1VLP3	HCS7020C.T.P4S.UL	CZSB120HCRRUL	5S-2LA-HSE020C LLB G/GL P42	S7020CE/HCP4A GA	VEX100 /S/NS 7CE1 UL
105	160	26	2MMVC9121HX VV SUL	105BNC10SN24TRV1VLP3	HCS7021C.T.P4S.UL	CZSB121HCRRUL	5S-2LA-HSE021C LLB G/GL P42	S7021CE/HCP4A GA	VEX105 /S/NS 7CE1 UL
110	170	28	2MMVC9122HX VV SUL	110BNC10SN24TRV1VLP3	HCS7022C.T.P4S.UL	CZSB122HCRRUL	5S-2LA-HSE022C LLB G/GL P42	S7022CE/HCP4A GA	VEX110 /S/NS 7CE1 UL
120	180	28	2MMVC9124HX VV SUL	120BNC10SN24TRV1VLP3	HCS7024C.T.P4S.UL	CZSB124HCRRUL	5S-2LA-HSE024C LLB G/GL P42	S7024CE/HCP4A GA	VEX120 /S/NS 7CE1 UL

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High Speed Spindle Sealed Bearing Interchange List



ISO 10 Series with a 25 deg Contact Angle and Steel Balls

Bore (mm)	O.D. (mm)	Width (mm)	Timken	NSK	FAG	Barden	NTN	SKF	SNFA
10	26	8	3MMV9100HX VV SUL		HSS7000E.T.P4S.UL	ZSB100HERRUL		S7000ACE/P4A GA	VEX10 /S 7CE3 UL
12	28	8	3MMV9101HX VV SUL		HSS7001E.T.P4S.UL	ZSB101HERRUL		S7001ACE/P4A GA	VEX12 /S 7CE3 UL
15	32	9	3MMV9102HX VV SUL		HSS7002E.T.P4S.UL	ZSB102HERRUL		S7002ACE/P4A GA	VEX15 /S 7CE3 UL
17	35	10	3MMV9103HX VV SUL		HSS7003E.T.P4S.UL	ZSB103HERRUL		S7003ACE/P4A GA	VEX17 /S 7CE3 UL
20	42	12	3MMV9104HX VV SUL		HSS7004E.T.P4S.UL	ZSB104HERRUL		S7004ACE/P4A GA	VEX20 /S 7CE3 UL
25	47	12	3MMV9105HX VV SUL		HSS7005E.T.P4S.UL	ZSB105HERRUL		S7005ACE/P4A GA	VEX25 /S 7CE3 UL
30	55	13	3MMV9106HX VV SUL		HSS7006E.T.P4S.UL	ZSB106HERRUL		S7006ACE/P4A GA	VEX30 /S 7CE3 UL
35	62	14	3MMV9107HX VV SUL		HSS7007E.T.P4S.UL	ZSB107HERRUL		S7007ACE/P4A GA	VEX35 /S 7CE3 UL
40	68	15	3MMV9108HX VV SUL		HSS7008E.T.P4S.UL	ZSB108HERRUL		S7008ACE/P4A GA	VEX40 /S 7CE3 UL
45	75	16	3MMV9109HX VV SUL		HSS7009E.T.P4S.UL	ZSB109HERRUL		S7009ACE/P4A GA	VEX45 /S 7CE3 UL
50	80	16	3MMV9110HX VV SUL		HSS7010E.T.P4S.UL	ZSB110HERRUL	2LA-HSE010AD LLB G/GL P42	S7010ACE/P4A GA	VEX50 /S 7CE3 UL
55	90	18	3MMV9111HX VV SUL		HSS7011E.T.P4S.UL	ZSB111HERRUL	2LA-HSE011AD LLB G/GL P42	S7011ACE/P4A GA	VEX55 /S 7CE3 UL
60	95	18	3MMV9112HX VV SUL		HSS7012E.T.P4S.UL	ZSB112HERRUL	2LA-HSE012AD LLB G/GL P42	S7012ACE/P4A GA	VEX60 /S 7CE3 UL
65	100	18	3MMV9113HX VV SUL		HSS7013E.T.P4S.UL	ZSB113HERRUL	2LA-HSE013AD LLB G/GL P42	S7013ACE/P4A GA	VEX65 /S 7CE3 UL
70	110	20	3MMV9114HX VV SUL		HSS7014E.T.P4S.UL	ZSB114HERRUL	2LA-HSE014AD LLB G/GL P42	S7014ACE/P4A GA	VEX70 /S 7CE3 UL
75	115	20	3MMV9115HX VV SUL		HSS7015E.T.P4S.UL	ZSB115HERRUL	2LA-HSE015AD LLB G/GL P42	S7015ACE/P4A GA	VEX75 /S 7CE3 UL
80	125	22	3MMV9116HX VV SUL		HSS7016E.T.P4S.UL	ZSB116HERRUL	2LA-HSE016AD LLB G/GL P42	S7016ACE/P4A GA	VEX80 /S 7CE3 UL
85	130	22	3MMV9117HX VV SUL		HSS7017E.T.P4S.UL	ZSB117HERRUL	2LA-HSE017AD LLB G/GL P42	S7017ACE/P4A GA	VEX85 /S 7CE3 UL
90	140	24	3MMV9118HX VV SUL		HSS7018E.T.P4S.UL	ZSB118HERRUL	2LA-HSE018AD LLB G/GL P42	S7018ACE/P4A GA	VEX90 /S 7CE3 UL
95	145	24	3MMV9119HX VV SUL		HSS7019E.T.P4S.UL	ZSB119HERRUL	2LA-HSE019AD LLB G/GL P42	S7019ACE/P4A GA	VEX95 /S 7CE3 UL
100	150	24	3MMV9120HX VV SUL		HSS7020E.T.P4S.UL	ZSB120HERRUL	2LA-HSE020AD LLB G/GL P42	S7020ACE/P4A GA	VEX100 /S 7CE3 UL
105	160	26	3MMV9121HX VV SUL		HSS7021E.T.P4S.UL	ZSB121HERRUL	2LA-HSE021AD LLB G/GL P42	S7021ACE/P4A GA	VEX105 /S 7CE3 UL
110	170	28	3MMV9122HX VV SUL		HSS7022E.T.P4S.UL	ZSB122HERRUL	2LA-HSE022AD LLB G/GL P42	S7022ACE/P4A GA	VEX110 /S 7CE3 UL
120	180	28	3MMV9124HX VV SUL		HSS7024E.T.P4S.UL	ZSB124HERRUL	2LA-HSE024AD LLB G/GL P42	S7024ACE/P4A GA	VEX120 /S 7CE3 UL

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High Speed Spindle Sealed Bearing Interchange List



ISO 10 Series with a 15 deg Contact Angle and Steel Balls

ISO 10 Series with a 15 deg Contact Angle and Ceramic Balls

Bore (mm)	O.D. (mm)	Width (mm)	Timken	NSK	FAG	Barden	NTN	SKF	SNFA
10	26	8	3MMVC9100HX VV SUL		HCS7000E.T.P4S.UL	CZSB100HERRUL		S7000ACE/HCP4A GA	VEX10 /S/NS 7CE3 UL
12	28	8	3MMVC9101HX VV SUL		HCS7001E.T.P4S.UL	CZSB101HERRUL		S7001ACE/HCP4A GA	VEX12 /S/NS 7CE3 UL
15	32	9	3MMVC9102HX VV SUL		HCS7002E.T.P4S.UL	CZSB102HERRUL		S7002ACE/HCP4A GA	VEX15 /S/NS 7CE3 UL
17	35	10	3MMVC9103HX VV SUL		HCS7003E.T.P4S.UL	CZSB103HERRUL		S7003ACE/HCP4A GA	VEX17 /S/NS 7CE3 UL
20	42	12	3MMVC9104HX VV SUL		HCS7004E.T.P4S.UL	CZSB104HERRUL		S7004ACE/HCP4A GA	VEX20 /S/NS 7CE3 UL
25	47	12	3MMVC9105HX VV SUL		HCS7005E.T.P4S.UL	CZSB105HERRUL		S7005ACE/HCP4A GA	VEX25 /S/NS 7CE3 UL
30	55	13	3MMVC9106HX VV SUL		HCS7006E.T.P4S.UL	CZSB106HERRUL		S7006ACE/HCP4A GA	VEX30 /S/NS 7CE3 UL
35	62	14	3MMVC9107HX VV SUL		HCS7007E.T.P4S.UL	CZSB107HERRUL		S7007ACE/HCP4A GA	VEX35 /S/NS 7CE3 UL
40	68	15	3MMVC9108HX VV SUL		HCS7008E.T.P4S.UL	CZSB108HERRUL		S7008ACE/HCP4A GA	VEX40 /S/NS 7CE3 UL
45	75	16	3MMVC9109HX VV SUL		HCS7009E.T.P4S.UL	CZSB109HERRUL		S7009ACE/HCP4A GA	VEX45 /S/NS 7CE3 UL
50	80	16	3MMVC9110HX VV SUL		HCS7010E.T.P4S.UL	CZSB110HERRUL	5S-2LA-HSE010AD LLB G/GL P42	S7010ACE/HCP4A GA	VEX50 /S/NS 7CE3 UL
55	90	18	3MMVC9111HX VV SUL		HCS7011E.T.P4S.UL	CZSB111HERRUL	5S-2LA-HSE011AD LLB G/GL P42	S7011ACE/HCP4A GA	VEX55 /S/NS 7CE3 UL
60	95	18	3MMVC9112HX VV SUL		HCS7012E.T.P4S.UL	CZSB112HERRUL	5S-2LA-HSE012AD LLB G/GL P42	S7012ACE/HCP4A GA	VEX60 /S/NS 7CE3 UL
65	100	18	3MMVC9113HX VV SUL		HCS7013E.T.P4S.UL	CZSB113HERRUL	5S-2LA-HSE013AD LLB G/GL P42	S7013ACE/HCP4A GA	VEX65 /S/NS 7CE3 UL
70	110	20	3MMVC9114HX VV SUL		HCS7014E.T.P4S.UL	CZSB114HERRUL	5S-2LA-HSE014AD LLB G/GL P42	S7014ACE/HCP4A GA	VEX70 /S/NS 7CE3 UL
75	115	20	3MMVC9115HX VV SUL		HCS7015E.T.P4S.UL	CZSB115HERRUL	5S-2LA-HSE015AD LLB G/GL P42	S7015ACE/HCP4A GA	VEX75 /S/NS 7CE3 UL
80	125	22	3MMVC9116HX VV SUL		HCS7016E.T.P4S.UL	CZSB116HERRUL	5S-2LA-HSE016AD LLB G/GL P42	S7016ACE/HCP4A GA	VEX80 /S/NS 7CE3 UL
85	130	22	3MMVC9117HX VV SUL		HCS7017E.T.P4S.UL	CZSB117HERRUL	5S-2LA-HSE017AD LLB G/GL P42	S7017ACE/HCP4A GA	VEX85 /S/NS 7CE3 UL
90	140	24	3MMVC9118HX VV SUL		HCS7018E.T.P4S.UL	CZSB118HERRUL	5S-2LA-HSE018AD LLB G/GL P42	S7018ACE/HCP4A GA	VEX90 /S/NS 7CE3 UL
95	145	24	3MMVC9119HX VV SUL		HCS7019E.T.P4S.UL	CZSB119HERRUL	5S-2LA-HSE019AD LLB G/GL P42	S7019ACE/HCP4A GA	VEX95 /S/NS 7CE3 UL
100	150	24	3MMVC9120HX VV SUL		HCS7020E.T.P4S.UL	CZSB120HERRUL	5S-2LA-HSE020AD LLB G/GL P42	S7020ACE/HCP4A GA	VEX100 /S/NS 7CE3 UL
105	160	26	3MMVC9121HX VV SUL		HCS7021E.T.P4S.UL	CZSB121HERRUL	5S-2LA-HSE021AD LLB G/GL P42	S7021ACE/HCP4A GA	VEX105 /S/NS 7CE3 UL
110	170	28	3MMVC9122HX VV SUL		HCS7022E.T.P4S.UL	CZSB122HERRUL	5S-2LA-HSE022AD LLB G/GL P42	S7022ACE/HCP4A GA	VEX110 /S/NS 7CE3 UL
120	180	28	3MMVC9124HX VV SUL		HCS7024E.T.P4S.UL	CZSB124HERRUL	5S-2LA-HSE024AD LLB G/GL P42	S7024ACE/HCP4A GA	VEX120 /S/NS 7CE3 UL
10	22	6	2MMV9300HX VV SUL		HSS71900C.T.P4S.UL	ZSB1900HCRRUL		S71900CE/P4A GA	VEB10 /S 7CE1 UL
12	24	6	2MMV9301HX VV SUL		HSS71901C.T.P4S.UL	ZSB1901HCRRUL		S71901CE/P4A GA	VEB12 /S 7CE1 UL
15	28	7	2MMV9302HX VV SUL		HSS71902C.T.P4S.UL	ZSB1902HCRRUL		S71902CE/P4A GA	VEB15 /S 7CE1 UL
17	30	7	2MMV9303HX VV SUL		HSS71903C.T.P4S.UL	ZSB1903HCRRUL		S71903CE/P4A GA	VEB17 /S 7CE1 UL
20	37	9	2MMV9304HX VV SUL		HSS71904C.T.P4S.UL	ZSB1904HCRRUL		S71904CE/P4A GA	VEB20 /S 7CE1 UL
25	42	9	2MMV9305HX VV SUL		HSS71905C.T.P4S.UL	ZSB1905HCRRUL		S71905CE/P4A GA	VEB25 /S 7CE1 UL
30	47	9	2MMV9306HX VV SUL		HSS71906C.T.P4S.UL	ZSB1906HCRRUL		S71906CE/P4A GA	VEB30 /S 7CE1 UL
35	55	10	2MMV9307HX VV SUL	35BNC19TRV1VLP3	HSS71907C.T.P4S.UL	ZSB1907HCRRUL		S71907CE/P4A GA	VEB35 /S 7CE1 UL
40	62	12	2MMV9308HX VV SUL	40BNC19TRV1VLP3	HSS71908C.T.P4S.UL	ZSB1908HCRRUL		S71908CE/P4A GA	VEB40 /S 7CE1 UL
45	68	12	2MMV9309HX VV SUL	45BNC19TRV1VLP3	HSS71909C.T.P4S.UL	ZSB1909HCRRUL		S71909CE/P4A GA	VEB45 /S 7CE1 UL
50	72	12	2MMV9310HX VV SUL	50BNC19TRV1VLP3	HSS71910C.T.P4S.UL	ZSB1910HCRRUL	2LA-HSE910C LLB G/GL P42	S71910CE/P4A GA	VEB50 /S 7CE1 UL
55	80	13	2MMV9311HX VV SUL	55BNC19TRV1VLP3	HSS71911C.T.P4S.UL	ZSB1911HCRRUL	2LA-HSE911C LLB G/GL P42	S71911CE/P4A GA	VEB55 /S 7CE1 UL
60	85	13	2MMV9312HX VV SUL	60BNC19TRV1VLP3	HSS71912C.T.P4S.UL	ZSB1912HCRRUL	2LA-HSE912C LLB G/GL P42	S71912CE/P4A GA	VEB60 /S 7CE1 UL
65	90	13	2MMV9313HX VV SUL	65BNC19TRV1VLP3	HSS71913C.T.P4S.UL	ZSB1913HCRRUL	2LA-HSE913C LLB G/GL P42	S71913CE/P4A GA	VEB65 /S 7CE1 UL
70	100	16	2MMV9314HX VV SUL	70BNC19TRV1VLP3	HSS71914C.T.P4S.UL	ZSB1914HCRRUL	2LA-HSE914C LLB G/GL P42	S71914CE/P4A GA	VEB70 /S 7CE1 UL
75	105	16	2MMV9315HX VV SUL	75BNC19TRV1VLP3	HSS71915C.T.P4S.UL	ZSB1915HCRRUL	2LA-HSE915C LLB G/GL P42	S71915CE/P4A GA	VEB75 /S 7CE1 UL
80	110	16	2MMV9316HX VV SUL	80BNC19TRV1VLP3	HSS71916C.T.P4S.UL	ZSB1916HCRRUL	2LA-HSE916C LLB G/GL P42	S71916CE/P4A GA	VEB80 /S 7CE1 UL
85	120	18	2MMV9317HX VV SUL	85BNC19TRV1VLP3	HSS71917C.T.P4S.UL	ZSB1917HCRRUL	2LA-HSE917C LLB G/GL P42	S71917CE/P4A GA	VEB85 /S 7CE1 UL
90	125	18	2MMV9318HX VV SUL	90BNC19TRV1VLP3	HSS71918C.T.P4S.UL	ZSB1918HCRRUL	2LA-HSE918C LLB G/GL P42	S71918CE/P4A GA	VEB90 /S 7CE1 UL
95	130	18	2MMV9319HX VV SUL	95BNC19TRV1VLP3	HSS71919C.T.P4S.UL	ZSB1919HCRRUL	2LA-HSE919C LLB G/GL P42	S71919CE/P4A GA	VEB95 /S 7CE1 UL
100	140	20	2MMV9320HX VV SUL	100BNC19TRV1VLP3	HSS71920C.T.P4S.UL	ZSB1920HCRRUL	2LA-HSE920C LLB G/GL P42	S71920CE/P4A GA	VEB100 /S 7CE1 UL
110	150	20	2MMV9322HX VV SUL	110BNC19TRV1VLP3	HSS71922C.T.P4S.UL	ZSB1922HCRRUL	2LA-HSE922C LLB G/GL P42	S71922CE/P4A GA	VEB110 /S 7CE1 UL
120	165	22	2MMV9324HX VV SUL	120BNC19TRV1VLP3	HSS71924C.T.P4S.UL		2LA-HSE924C LLB G/GL P42	S71924CE/P4A GA	VEB120 /S 7CE1 UL
130	180	24	2MMV9326HX VV SUL	130BNC19TRV1VLP3	HSS71926C.T.P4S.UL		2LA-HSE926C LLB G/GL P42	S71926CE/P4A GA	VEB130 /S 7CE1 UL
140	190	24	2MMV9328HX VV SUL	140BNC19TRV1VLP3			2LA-HSE928C LLB G/GL P42	S71928CE/P4A GA	VEB140 /S 7CE1 UL
150	210	28	2MMV9330HX VV SUL	150BNC19TRV1VLP3			2LA-HSE930C LLB G/GL P42	S71930CE/P4A GA	VEB150 /S 7CE1 UL

TIMKEN

Timken Machine Tool

High Speed Spindle Sealed Bearing Interchange List



ISO 10 Series with a 25 deg Contact Angle and Steel Balls

Bore (mm)	O.D. (mm)	Width (mm)	Timken	NSK	FAG	Barden	NTN	SKF	SNFA
10	22	6	2MMVC9300HX VV SUL		HCS71900C.T.P4S.UL	CZSB1900HCRRUL		S71900CE/HCP4A GA	VEB10 /S/NS 7CE1 UL
12	24	6	2MMVC9301HX VV SUL		HCS71901C.T.P4S.UL	CZSB1901HCRRUL		S71901CE/HCP4A GA	VEB12 /S/NS 7CE1 UL
15	28	7	2MMVC9302HX VV SUL		HCS71902C.T.P4S.UL	CZSB1902HCRRUL		S71902CE/HCP4A GA	VEB15 /S/NS 7CE1 UL
17	30	7	2MMVC9303HX VV SUL		HCS71903C.T.P4S.UL	CZSB1903HCRRUL		S71903CE/HCP4A GA	VEB17 /S/NS 7CE1 UL
20	37	9	2MMVC9304HX VV SUL		HCS71904C.T.P4S.UL	CZSB1904HCRRUL		S71904CE/HCP4A GA	VEB20 /S/NS 7CE1 UL
25	42	9	2MMVC9305HX VV SUL		HCS71905C.T.P4S.UL	CZSB1905HCRRUL		S71905CE/HCP4A GA	VEB25 /S/NS 7CE1 UL
30	47	9	2MMVC9306HX VV SUL		HCS71906C.T.P4S.UL	CZSB1906HCRRUL		S71906CE/HCP4A GA	VEB30 /S/NS 7CE1 UL
35	55	10	2MMVC9307HX VV SUL	35BNC19SN24TRV1VLP3	HCS71907C.T.P4S.UL	CZSB1907HCRRUL		S71907CE/HCP4A GA	VEB35 /S/NS 7CE1 UL
40	62	12	2MMVC9308HX VV SUL	40BNC19SN24TRV1VLP3	HCS71908C.T.P4S.UL	CZSB1908HCRRUL		S71908CE/HCP4A GA	VEB40 /S/NS 7CE1 UL
45	68	12	2MMVC9309HX VV SUL	45BNC19SN24TRV1VLP3	HCS71909C.T.P4S.UL	CZSB1909HCRRUL		S71909CE/HCP4A GA	VEB45 /S/NS 7CE1 UL
50	72	12	2MMVC9310HX VV SUL	50BNC19SN24TRV1VLP3	HCS71910C.T.P4S.UL	CZSB1910HCRRUL	5S-2LA-HSE910C LLB G/GL P42	S71910CE/HCP4A GA	VEB50 /S/NS 7CE1 UL
55	80	13	2MMVC9311HX VV SUL	55BNC19SN24TRV1VLP3	HCS71911C.T.P4S.UL	CZSB1911HCRRUL	5S-2LA-HSE911C LLB G/GL P42	S71911CE/HCP4A GA	VEB55 /S/NS 7CE1 UL
60	85	13	2MMVC9312HX VV SUL	60BNC19SN24TRV1VLP3	HCS71912C.T.P4S.UL	CZSB1912HCRRUL	5S-2LA-HSE912C LLB G/GL P42	S71912CE/HCP4A GA	VEB60 /S/NS 7CE1 UL
65	90	13	2MMVC9313HX VV SUL	65BNC19SN24TRV1VLP3	HCS71913C.T.P4S.UL	CZSB1913HCRRUL	5S-2LA-HSE913C LLB G/GL P42	S71913CE/HCP4A GA	VEB65 /S/NS 7CE1 UL
70	100	16	2MMVC9314HX VV SUL	70BNC19SN24TRV1VLP3	HCS71914C.T.P4S.UL	CZSB1914HCRRUL	5S-2LA-HSE914C LLB G/GL P42	S71914CE/HCP4A GA	VEB70 /S/NS 7CE1 UL
75	105	16	2MMVC9315HX VV SUL	75BNC19SN24TRV1VLP3	HCS71915C.T.P4S.UL	CZSB1915HCRRUL	5S-2LA-HSE915C LLB G/GL P42	S71915CE/HCP4A GA	VEB75 /S/NS 7CE1 UL
80	110	16	2MMVC9316HX VV SUL	80BNC19SN24TRV1VLP3	HCS71916C.T.P4S.UL	CZSB1916HCRRUL	5S-2LA-HSE916C LLB G/GL P42	S71916CE/HCP4A GA	VEB80 /S/NS 7CE1 UL
85	120	18	2MMVC9317HX VV SUL	85BNC19SN24TRV1VLP3	HCS71917C.T.P4S.UL	CZSB1917HCRRUL	5S-2LA-HSE917C LLB G/GL P42	S71917CE/HCP4A GA	VEB85 /S/NS 7CE1 UL
90	125	18	2MMVC9318HX VV SUL	90BNC19SN24TRV1VLP3	HCS71918C.T.P4S.UL	CZSB1918HCRRUL	5S-2LA-HSE918C LLB G/GL P42	S71918CE/HCP4A GA	VEB90 /S/NS 7CE1 UL
95	130	18	2MMVC9319HX VV SUL	95BNC19SN24TRV1VLP3	HCS71919C.T.P4S.UL	CZSB1919HCRRUL	5S-2LA-HSE919C LLB G/GL P42	S71919CE/HCP4A GA	VEB95 /S/NS 7CE1 UL
100	140	20	2MMVC9320HX VV SUL	100BNC1SN249TRV1VLP3	HCS71920C.T.P4S.UL	CZSB1920HCRRUL	5S-2LA-HSE920C LLB G/GL P42	S71920CE/HCP4A GA	VEB100 /S/NS 7CE1 UL
110	150	20	2MMVC9322HX VV SUL	110BNC1SN249TRV1VLP3	HCS71922C.T.P4S.UL	CZSB1922HCRRUL	5S-2LA-HSE922C LLB G/GL P42	S71922CE/HCP4A GA	VEB110 /S/NS 7CE1 UL
120	165	22	2MMVC9324HX VV SUL	120BNC1SN249TRV1VLP3	HCS71924C.T.P4S.UL		5S-2LA-HSE924C LLB G/GL P42	S71924CE/HCP4A GA	VEB120 /S/NS 7CE1 UL
130	180	24	2MMVC9326HX VV SUL	130BNC1SN249TRV1VLP3	HCS71926C.T.P4S.UL		5S-2LA-HSE926C LLB G/GL P42	S71926CE/HCP4A GA	VEB130 /S/NS 7CE1 UL
140	190	24	2MMVC9328HX VV SUL	140BNC1SN249TRV1VLP3			5S-2LA-HSE928C LLB G/GL P42	S71928CE/HCP4A GA	VEB140 /S/NS 7CE1 UL
150	210	28	2MMVC9330HX VV SUL	150BNC1SN249TRV1VLP3			5S-2LA-HSE930C LLB G/GL P42	S71930CE/HCP4A GA	VEB150 /S/NS 7CE1 UL

TIMKEN

Timken Machine Tool

High Speed Spindle Sealed Bearing Interchange List



ISO 19 Series with a 25 deg Contact Angle and Steel Balls

ISO 19 Series with a 25 deg Contact Angle and Ceramic Balls

Bore (mm)	O.D. (mm)	Width (mm)	Timken	NSK	FAG	Barden	NTN	SKF	SNFA
10	22	6	3MMV9300HX VV SUL		HSS71900E.T.P4S.UL	ZSB1900HERRUL		S71900ACE/P4A GA	VEB10 /S 7CE3 UL
12	24	6	3MMV9301HX VV SUL		HSS71901E.T.P4S.UL	ZSB1901HERRUL		S71901ACE/P4A GA	VEB12 /S 7CE3 UL
15	28	7	3MMV9302HX VV SUL		HSS71902E.T.P4S.UL	ZSB1902HERRUL		S71902ACE/P4A GA	VEB15 /S 7CE3 UL
17	30	7	3MMV9303HX VV SUL		HSS71903E.T.P4S.UL	ZSB1903HERRUL		S71903ACE/P4A GA	VEB17 /S 7CE3 UL
20	37	9	3MMV9304HX VV SUL		HSS71904E.T.P4S.UL	ZSB1904HERRUL		S71904ACE/P4A GA	VEB20 /S 7CE3 UL
25	42	9	3MMV9305HX VV SUL		HSS71905E.T.P4S.UL	ZSB1905HERRUL		S71905ACE/P4A GA	VEB25 /S 7CE3 UL
30	47	9	3MMV9306HX VV SUL		HSS71906E.T.P4S.UL	ZSB1906HERRUL		S71906ACE/P4A GA	VEB30 /S 7CE3 UL
35	55	10	3MMV9307HX VV SUL		HSS71907E.T.P4S.UL	ZSB1907HERRUL		S71907ACE/P4A GA	VEB35 /S 7CE3 UL
40	62	12	3MMV9308HX VV SUL		HSS71908E.T.P4S.UL	ZSB1908HERRUL		S71908ACE/P4A GA	VEB40 /S 7CE3 UL
45	68	12	3MMV9309HX VV SUL		HSS71909E.T.P4S.UL	ZSB1909HERRUL		S71909ACE/P4A GA	VEB45 /S 7CE3 UL
50	72	12	3MMV9310HX VV SUL		HSS71910E.T.P4S.UL	ZSB1910HERRUL	2LA-HSE910AD LLB G/GL P42	S71910ACE/P4A GA	VEB50 /S 7CE3 UL
55	80	13	3MMV9311HX VV SUL		HSS71911E.T.P4S.UL	ZSB1911HERRUL	2LA-HSE911AD LLB G/GL P42	S71911ACE/P4A GA	VEB55 /S 7CE3 UL
60	85	13	3MMV9312HX VV SUL		HSS71912E.T.P4S.UL	ZSB1912HERRUL	2LA-HSE912AD LLB G/GL P42	S71912ACE/P4A GA	VEB60 /S 7CE3 UL
65	90	13	3MMV9313HX VV SUL		HSS71913E.T.P4S.UL	ZSB1913HERRUL	2LA-HSE913AD LLB G/GL P42	S71913ACE/P4A GA	VEB65 /S 7CE3 UL
70	100	16	3MMV9314HX VV SUL		HSS71914E.T.P4S.UL	ZSB1914HERRUL	2LA-HSE914AD LLB G/GL P42	S71914ACE/P4A GA	VEB70 /S 7CE3 UL
75	105	16	3MMV9315HX VV SUL		HSS71915E.T.P4S.UL	ZSB1915HERRUL	2LA-HSE915AD LLB G/GL P42	S71915ACE/P4A GA	VEB75 /S 7CE3 UL
80	110	16	3MMV9316HX VV SUL		HSS71916E.T.P4S.UL	ZSB1916HERRUL	2LA-HSE916AD LLB G/GL P42	S71916ACE/P4A GA	VEB80 /S 7CE3 UL
85	120	18	3MMV9317HX VV SUL		HSS71917E.T.P4S.UL	ZSB1917HERRUL	2LA-HSE917AD LLB G/GL P42	S71917ACE/P4A GA	VEB85 /S 7CE3 UL
90	125	18	3MMV9318HX VV SUL		HSS71918E.T.P4S.UL	ZSB1918HERRUL	2LA-HSE918AD LLB G/GL P42	S71918ACE/P4A GA	VEB90 /S 7CE3 UL
95	130	18	3MMV9319HX VV SUL		HSS71919E.T.P4S.UL	ZSB1919HERRUL	2LA-HSE919AD LLB G/GL P42	S71919ACE/P4A GA	VEB95 /S 7CE3 UL
100	140	20	3MMV9320HX VV SUL		HSS71920E.T.P4S.UL	ZSB1920HERRUL	2LA-HSE920AD LLB G/GL P42	S71920ACE/P4A GA	VEB100 /S 7CE3 UL
110	150	20	3MMV9322HX VV SUL		HSS71922E.T.P4S.UL	ZSB1922HERRUL	2LA-HSE922AD LLB G/GL P42	S71922ACE/P4A GA	VEB110 /S 7CE3 UL
120	165	22	3MMV9324HX VV SUL		HSS71924E.T.P4S.UL		2LA-HSE924AD LLB G/GL P42	S71924ACE/P4A GA	VEB120 /S 7CE3 UL
130	180	24	3MMV9326HX VV SUL		HSS71926E.T.P4S.UL		2LA-HSE926AD LLB G/GL P42	S71926ACE/P4A GA	VEB130 /S 7CE3 UL
140	190	24	3MMV9328HX VV SUL				2LA-HSE928AD LLB G/GL P42	S71928ACE/P4A GA	VEB140 /S 7CE3 UL
150	210	28	3MMV9330HX VV SUL				2LA-HSE930AD LLB G/GL P42	S71930ACE/P4A GA	VEB150 /S 7CE3 UL
10	22	6	3MMVC9300HX VV SUL		HCS71900E.T.P4S.UL	CZSB1900HERRUL		S71900ACE/HCP4A GA	VEB10 /S/NS 7CE3 UL
12	24	6	3MMVC9301HX VV SUL		HCS71901E.T.P4S.UL	CZSB1901HERRUL		S71901ACE/HCP4A GA	VEB12 /S/NS 7CE3 UL
15	28	7	3MMVC9302HX VV SUL		HCS71902E.T.P4S.UL	CZSB1902HERRUL		S71902ACE/HCP4A GA	VEB15 /S/NS 7CE3 UL
17	30	7	3MMVC9303HX VV SUL		HCS71903E.T.P4S.UL	CZSB1903HERRUL		S71903ACE/HCP4A GA	VEB17 /S/NS 7CE3 UL
20	37	9	3MMVC9304HX VV SUL		HCS71904E.T.P4S.UL	CZSB1904HERRUL		S71904ACE/HCP4A GA	VEB20 /S/NS 7CE3 UL
25	42	9	3MMVC9305HX VV SUL		HCS71905E.T.P4S.UL	CZSB1905HERRUL		S71905ACE/HCP4A GA	VEB25 /S/NS 7CE3 UL
30	47	9	3MMVC9306HX VV SUL		HCS71906E.T.P4S.UL	CZSB1906HERRUL		S71906ACE/HCP4A GA	VEB30 /S/NS 7CE3 UL
35	55	10	3MMVC9307HX VV SUL		HCS71907E.T.P4S.UL	CZSB1907HERRUL		S71907ACE/HCP4A GA	VEB35 /S/NS 7CE3 UL
40	62	12	3MMVC9308HX VV SUL		HCS71908E.T.P4S.UL	CZSB1908HERRUL		S71908ACE/HCP4A GA	VEB40 /S/NS 7CE3 UL
45	68	12	3MMVC9309HX VV SUL		HCS71909E.T.P4S.UL	CZSB1909HERRUL		S71909ACE/HCP4A GA	VEB45 /S/NS 7CE3 UL
50	72	12	3MMVC9310HX VV SUL		HCS71910E.T.P4S.UL	CZSB1910HERRUL	5S-2LA-HSE910AD LLB G/GL P42	S71910ACE/HCP4A GA	VEB50 /S/NS 7CE3 UL
55	80	13	3MMVC9311HX VV SUL		HCS71911E.T.P4S.UL	CZSB1911HERRUL	5S-2LA-HSE911AD LLB G/GL P42	S71911ACE/HCP4A GA	VEB55 /S/NS 7CE3 UL
60	85	13	3MMVC9312HX VV SUL		HCS71912E.T.P4S.UL	CZSB1912HERRUL	5S-2LA-HSE912AD LLB G/GL P42	S71912ACE/HCP4A GA	VEB60 /S/NS 7CE3 UL
65	90	13	3MMVC9313HX VV SUL		HCS71913E.T.P4S.UL	CZSB1913HERRUL	5S-2LA-HSE913AD LLB G/GL P42	S71913ACE/HCP4A GA	VEB65 /S/NS 7CE3 UL
70	100	16	3MMVC9314HX VV SUL		HCS71914E.T.P4S.UL	CZSB1914HERRUL	5S-2LA-HSE914AD LLB G/GL P42	S71914ACE/HCP4A GA	VEB70 /S/NS 7CE3 UL
75	105	16	3MMVC9315HX VV SUL		HCS71915E.T.P4S.UL	CZSB1915HERRUL	5S-2LA-HSE915AD LLB G/GL P42	S71915ACE/HCP4A GA	VEB75 /S/NS 7CE3 UL
80	110	16	3MMVC9316HX VV SUL		HCS71916E.T.P4S.UL	CZSB1916HERRUL	5S-2LA-HSE916AD LLB G/GL P42	S71916ACE/HCP4A GA	VEB80 /S/NS 7CE3 UL
85	120	18	3MMVC9317HX VV SUL		HCS71917E.T.P4S.UL	CZSB1917HERRUL	5S-2LA-HSE917AD LLB G/GL P42	S71917ACE/HCP4A GA	VEB85 /S/NS 7CE3 UL
90	125	18	3MMVC9318HX VV SUL		HCS71918E.T.P4S.UL	CZSB1918HERRUL	5S-2LA-HSE918AD LLB G/GL P42	S71918ACE/HCP4A GA	VEB90 /S/NS 7CE3 UL
95	130	18	3MMVC9319HX VV SUL		HCS71919E.T.P4S.UL	CZSB1919HERRUL	5S-2LA-HSE919AD LLB G/GL P42	S71919ACE/HCP4A GA	VEB95 /S/NS 7CE3 UL
100	140	20	3MMVC9320HX VV SUL		HCS71920E.T.P4S.UL	CZSB1920HERRUL	5S-2LA-HSE920AD LLB G/GL P42	S71920ACE/HCP4A GA	VEB100 /S/NS 7CE3 UL
110	150	20	3MMVC9322HX VV SUL		HCS71922E.T.P4S.UL	CZSB1922HERRUL	5S-2LA-HSE922AD LLB G/GL P42	S71922ACE/HCP4A GA	VEB110 /S/NS 7CE3 UL
120	165	22	3MMVC9324HX VV SUL		HCS71924E.T.P4S.UL		5S-2LA-HSE924AD LLB G/GL P42	S71924ACE/HCP4A GA	VEB120 /S/NS 7CE3 UL
130	180	24	3MMVC9326HX VV SUL		HCS71926E.T.P4S.UL		5S-2LA-HSE926AD LLB G/GL P42	S71926ACE/HCP4A GA	VEB130 /S/NS 7CE3 UL
140	190	24	3MMVC9328HX VV SUL				5S-2LA-HSE928AD LLB G/GL P42	S71928ACE/HCP4A GA	VEB140 /S/NS 7CE3 UL
150	210	28	3MMVC9330HX VV SUL				5S-2LA-HSE930AD LLB G/GL P42	S71930ACE/HCP4A GA	VEB150 /S/NS 7CE3 UL

TIMKEN

Timken Machine Tool

High Speed Spindle Sealed Bearing Interchange List



Nomenclature

Timken	NSK	FAG	Barden	NTN	SKF	SNFA
Ring Material E - WearEver Steel rings & ceramic balls (drop the C and the CR from the part number) <blank> 52100 through hardened & heat stabilized to 400°F Contact Angle 2 prefix - 15° 3 prefix - 25° 4 prefix - 18° Precision Class MM/MMV super high precision between ABEC-7 (ISO P4) and ABEC-9 (ISO P2) MMX ultra precision. ABEC-9 (ISO P2) Series 91 ISO 10 dimensional series (9100 extra light) 93 ISO 19 dimensional series (9300 ultra light) Bore Code <nn> 04 and up multiply by 5 to get the bore in millimeters (00=10mm, 01=12mm, 02=15mm, 03=17mm). Construction HX internal geometry is optimized for speed. Cage Material CR Phenolic cage Sealing VV high speed seals both sides, greased for life (drop the CR from the part number) Bearings Set Quantity S single bearing D duplex pair of bearings T triplex set of bearings Q quadruplex set of bearings Sets U universally ground Preload Level X Extra Light L Light M Medium H Heavy	Bearing Bore <nnn> bearing bore (mm) Bearing Type BNC 15° contact angle (small ball series) BNR 18° contact angle (Robust series) BGR 15° contact angle (Robust grinding series) Dimension Series 10 ISO 10 Series 19 ISO 19 Series Material Symbol <blank> steel ball (BNC bearing type only) BN24 ceramic ball (BNC bearing type only) X SHX steel rings and ceramic balls (BNR & BGR bearing types) S steel balls (BNR & BGR bearing types) H ceramic balls (BNR & BGR bearing types) Cage Symbol TYN Polyamide TR Phenolic Arrangement Symbol DB back-to-back arrangement DT Tandem DBB four row arrangement Preload Symbol EL extra light L light CP preload, negative clearance (CP10 = -10µm) CA axial clearance (CA10 = +10µm) Precision/Tolerance Class P4 ISO Class 4 (ABEC7) P4Y Special ID/OD Tighter Tolerancing for set matching P3 Dimensions are ISO class 4, running accuracy ISO class 2 P2 ISO Class 2 (ABEC9)	Bearing Type HSS High speed bearing, steel balls. HSSS High speed bearing, steel balls, sealed. HCS High speed bearing, ceramic balls. HCSS High speed bearing, ceramic balls, sealed. XC X-life (Cronidur 30) ultra high speed bearing, ceramic balls. XCS X-life (Cronidur 30) ultra high speed bearing, ceramic balls, sealed. Series 70 ISO 10 dimensional series (medium series) 719 ISO 19 dimensional series (lightweight series) Bore Code <nn> 04 and up multiply by 5 to get the bore in millimeters (00=10mm, 01=12mm, 02=15mm, 03=17mm). Contact Angle C - 15° E - 25° Cage Material T Textile laminated Phenolic resin cage, outer ring piloted Accuracy P4S ABEC 7 nominal tolerances, ABEC 9 running accuracies Bearing Arrangement U universally ground, single bearing, any arrangement DU set of two universal bearings TU set of three universal bearings QU set of four universal bearings PU set of five universal bearings DB set of two bearings, back-to-back DF set of two bearings, face-to-face DT set of two bearings, tandem TBT set of three bearings, tandem-O-arrangement QBC set of four bearings, tandem-O-tandem arrangement Preload Level L Light M Medium H Heavy	Bearing Type ZSB High speed bearing, steel balls. CZSB Hybrid high speed bearing, ceramic balls. XCZSB X-life (Cronidur 30) ultra high speed bearing, ceramic balls. Series 100 ISO 10 dimensional series (medium series) 1900 ISO 19 dimensional series (lightweight series) Bore Code <nn> 04 and up multiply by 5 to get to bore in millimeters (00=10mm, 01=12mm, 02=15mm, 03=17mm). Cage Material H Textile laminated phenolic resin cage, outer ring piloted Contact Angle C - 15° E - 25° Seals RR seals at both sides and greased for life Bearing Arrangement U universally ground, single bearing, any arrangement DU set of two universal bearings TU set of three universal bearings QU set of four universal bearings PU set of five universal bearings DB set of two bearings, back-to-back DF set of two bearings, face-to-face DT set of two bearings, tandem TBT set of three bearings, tandem-O-arrangement QBC set of four bearings, tandem-O-tandem arrangement Preload Level L Light M Medium H Heavy	Material Code 5S ceramic rolling element <blank> steel balls Bearing Type HSB super high-speed angular contact Series 0 ISO 10 dimensional series 9 ISO 19 dimensional series Bore Code <nn> 04 and up multiply by 5 to get the bore in millimeters (00=10mm, 01=12mm, 02=15mm, 03=17mm). Cage Material T1 Phenolic T2 Plastic molded L1 Machined brass Contact Angle C - 15° B - 40° <blank> 30° Mounting Configuration G single universal flush ground (can be mounted in any configuration) GD2 pair of universal DB duplex - back-to-back DF duplex - face-to-face DT duplex tandem DBF, DFT, DTT triplex set DBTT, DFTT, DTBT, DTFT quad set Preload GL light GN normal GM medium GH heavy Precision/Tolerance Class P4 ISO Class 4 (ABEC 7) P2 ISO Class 2 (ABEC 9)	Features S Sealed bearing (B internal design only) C Ceramic balls (B internal design only) Bearing Series S70 ISO dimensional series 10 S719 ISO dimensional series 19 Bore Code 04 x 5 = 20mm bore diameter 30 x 5 = 150mm bore diameter Contact Angle C - 15° F - 18° (B internal design only) D - 25° (B internal design only) AC - 25° (E internal design only) Internal Design B - High speed sealed design E - High speed design Cage Material <blank> Outer ring land riding, fabric reinforced Phenolic resin. Material Symbol <blank> steel ball HC ceramic balls (E internal design only) Tolerance Class PA4, P7 dimensional accuracy to ISO class 4, running accuracy better than ISO class 4 PA9A, P9 accuracy to ABMA class ABEC 9 Number of Bearings in Set D 2 bearings in matched set T 3 bearings in matched set Q 4 bearings in matched set Bearing Arrangement in Matched Set B Back-to-back F Face-to-face T Tandem BT Back-to-back/tandem FT Face-to-face/tandem BC Back-to-back of pairs in tandem FC Face-to-face of pairs in tandem G For universal pairing Preload A Light preload B Medium preload C Heavy preload G... Special preload, e.g. G240	Form VE High speed internal geometry Bearing Series X ISO dimensional series 10 B ISO dimensional series 19 Bearing Bore <nnn> bearing bore (mm) Special Characteristic /NS ceramic balls Precision 7 ABEC 7 9 ABEC 9 Cage Material CE Outer ring land riding, fabric reinforced Phenolic resin Contact Angle 0 - 12° 1 - 15° 2 - 18° 3 - 25° Pairing set U Universal DU Duplex Universal TU Triplex Universal DD Back-to-back mounting FF Face-to-face mounting T Tandem TD Tandem/back-to-back TDT Tandem/back-to-back/tandem 3TD Tandem/tandem/back-to-back Preload L Light preload M Medium preload F Heavy preload

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, gears, chain and related mechanical power transmission products and services.

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Timken Machine Tool

Spindle Bearing Interchange List



ISO 10 Series with a 15 deg Contact Angle and Steel Balls

ISO 10 Series with a 15 deg Contact Angle and Ceramic Balls

Bore (mm)	O.D. (mm)	Width (mm)	Timken	NSK	FAG	Barden	NTN	SKF	SNFA
10	26	8	2MM9100WI CR SUL	7000 C TR SUL P3	B7000C.T.P4S.UL	100HCUL	7000UC T1 G/GL P42	7000CD/P4A GA	EX10 7CE1 UL
12	28	8	2MM9101WI CR SUL	7001 C TR SUL P3	B7001C.T.P4S.UL	101HCUL	7001UC T1 G/GL P42	7001CD/P4A GA	EX12 7CE1 UL
15	32	9	2MM9102WI CR SUL	7002 C TR SUL P3	B7002C.T.P4S.UL	102HCUL	7002UC T1 G/GL P42	7002CD/P4A GA	EX15 7CE1 UL
17	35	10	2MM9103WI CR SUL	7003 C TR SUL P3	B7003C.T.P4S.UL	103HCUL	7003UC T1 G/GL P42	7003CD/P4A GA	EX17 7CE1 UL
20	42	12	2MM9104WI CR SUL	7004 C TR SUL P3	B7004C.T.P4S.UL	104HCUL	7004UC T1 G/GL P42	7004CD/P4A GA	EX20 7CE1 UL
25	47	12	2MM9105WI CR SUL	7005 C TR SUL P3	B7005C.T.P4S.UL	105HCUL	7005UC T1 G/GL P42	7005CD/P4A GA	EX25 7CE1 UL
30	55	15	2MM9106WI CR SUL	7006 C TR SUL P3	B7006C.T.P4S.UL	106HCUL	7006UC T1 G/GL P42	7006CD/P4A GA	EX30 7CE1 UL
35	62	14	2MM9107WI CR SUL	7007 C TR SUL P3	B7007C.T.P4S.UL	107HCUL	7007UC T1 G/GL P42	7007CD/P4A GA	EX35 7CE1 UL
40	68	15	2MM9108WI CR SUL	7008 C TR SUL P3	B7008C.T.P4S.UL	108HCUL	7008UC T1 G/GL P42	7008CD/P4A GA	EX40 7CE1 UL
45	75	16	2MM9109WI CR SUL	7009 C TR SUL P3	B7009C.T.P4S.UL	109HCUL	7009UC T1 G/GL P42	7009CD/P4A GA	EX45 7CE1 UL
50	80	16	2MM9110WI CR SUL	7010 C TR SUL P3	B7010C.T.P4S.UL	110HCUL	7010UC T1 G/GL P42	7010CD/P4A GA	EX50 7CE1 UL
55	90	18	2MM9111WI CR SUL	7011 C TR SUL P3	B7011C.T.P4S.UL	111HCUL	7011UC T1 G/GL P42	7011CD/P4A GA	EX55 7CE1 UL
60	95	18	2MM9112WI CR SUL	7012 C TR SUL P3	B7012C.T.P4S.UL	112HCUL	7012UC T1 G/GL P42	7012CD/P4A GA	EX60 7CE1 UL
65	100	18	2MM9113WI CR SUL	7013 C TR SUL P3	B7013C.T.P4S.UL	113HCUL	7013UC T1 G/GL P42	7013CD/P4A GA	EX65 7CE1 UL
70	110	20	2MM9114WI CR SUL	7014 C TR SUL P3	B7014C.T.P4S.UL	114HCUL	7014UC T1 G/GL P42	7014CD/P4A GA	EX70 7CE1 UL
75	115	20	2MM9115WI CR SUL	7015 C TR SUL P3	B7015C.T.P4S.UL	115HCUL	7015UC T1 G/GL P42	7015CD/P4A GA	EX75 7CE1 UL
80	125	22	2MM9116WI CR SUL	7016 C TR SUL P3	B7016C.T.P4S.UL	116HCUL	7016UC T1 G/GL P42	7016CD/P4A GA	EX80 7CE1 UL
85	130	22	2MM9117WI CR SUL	7017 C TR SUL P3	B7017C.T.P4S.UL	117HCUL	7017UC T1 G/GL P42	7017CD/P4A GA	EX85 7CE1 UL
90	140	24	2MM9118WI CR SUL	7018 C TR SUL P3	B7018C.T.P4S.UL	118HCUL	7018UC T1 G/GL P42	7018CD/P4A GA	EX90 7CE1 UL
95	145	24	2MM9119WI CR SUL	7019 C TR SUL P3	B7019C.T.P4S.UL	119HCUL	7019UC T1 G/GL P42	7019CD/P4A GA	EX95 7CE1 UL
100	150	24	2MM9120WI CR SUL	7020 C TR SUL P3	B7020C.T.P4S.UL	120HCUL	7020UC T1 G/GL P42	7020CD/P4A GA	EX100 7CE1 UL
105	160	26	2MM9121WI CR SUL	7021 C TR SUL P3	B7021C.T.P4S.UL	121HCUL	7021UC T1 G/GL P42	7021CD/P4A GA	EX105 7CE1 UL
110	170	28	2MM9122WI CR SUL	7022 C TR SUL P3	B7022C.T.P4S.UL	122HCUL	7022UC T1 G/GL P42	7022CD/P4A GA	EX110 7CE1 UL
120	180	28	2MM9124WI CR SUL	7024 C TR SUL P3	B7024C.T.P4S.UL	124HCUL	7024UC T1 G/GL P42	7024CD/P4A GA	EX120 7CE1 UL
10	26	8	2MMC9100WI CR SUL	7000 C SN24 TR SUL P3	HCB7000C.T.P4S.UL	C100HCUL	5S-7000UC T1 G/GL P42	7000CD/HCP4A GA	EX10 /NS 7CE1 UL
12	28	8	2MMC9101WI CR SUL	7001 C SN24 TR SUL P3	HCB7001C.T.P4S.UL	C101HCUL	5S-7001UC T1 G/GL P42	7001CD/HCP4A GA	EX12 /NS 7CE1 UL
15	32	9	2MMC9102WI CR SUL	7002 C SN24 TR SUL P3	HCB7002C.T.P4S.UL	C102HCUL	5S-7002UC T1 G/GL P42	7002CD/HCP4A GA	EX15 /NS 7CE1 UL
17	35	10	2MMC9103WI CR SUL	7003 C SN24 TR SUL P3	HCB7003C.T.P4S.UL	C103HCUL	5S-7003UC T1 G/GL P42	7003CD/HCP4A GA	EX17 /NS 7CE1 UL
20	42	12	2MMC9104WI CR SUL	7004 C SN24 TR SUL P3	HCB7004C.T.P4S.UL	C104HCUL	5S-7004UC T1 G/GL P42	7004CD/HCP4A GA	EX20 /NS 7CE1 UL
25	47	12	2MMC9105WI CR SUL	7005 C SN24 TR SUL P3	HCB7005C.T.P4S.UL	C105HCUL	5S-7005UC T1 G/GL P42	7005CD/HCP4A GA	EX25 /NS 7CE1 UL
30	55	15	2MMC9106WI CR SUL	7006 C SN24 TR SUL P3	HCB7006C.T.P4S.UL	C106HCUL	5S-7006UC T1 G/GL P42	7006CD/HCP4A GA	EX30 /NS 7CE1 UL
35	62	14	2MMC9107WI CR SUL	7007 C SN24 TR SUL P3	HCB7007C.T.P4S.UL	C107HCUL	5S-7007UC T1 G/GL P42	7007CD/HCP4A GA	EX35 /NS 7CE1 UL
40	68	15	2MMC9108WI CR SUL	7008 C SN24 TR SUL P3	HCB7008C.T.P4S.UL	C108HCUL	5S-7008UC T1 G/GL P42	7008CD/HCP4A GA	EX40 /NS 7CE1 UL
45	75	16	2MMC9109WI CR SUL	7009 C SN24 TR SUL P3	HCB7009C.T.P4S.UL	C109HCUL	5S-7009UC T1 G/GL P42	7009CD/HCP4A GA	EX45 /NS 7CE1 UL
50	80	16	2MMC9110WI CR SUL	7010 C SN24 TR SUL P3	HCB7010C.T.P4S.UL	C110HCUL	5S-7010UC T1 G/GL P42	7010CD/HCP4A GA	EX50 /NS 7CE1 UL
55	90	18	2MMC9111WI CR SUL	7011 C SN24 TR SUL P3	HCB7011C.T.P4S.UL	C111HCUL	5S-7011UC T1 G/GL P42	7011CD/HCP4A GA	EX55 /NS 7CE1 UL
60	95	18	2MMC9112WI CR SUL	7012 C SN24 TR SUL P3	HCB7012C.T.P4S.UL	C112HCUL	5S-7012UC T1 G/GL P42	7012CD/HCP4A GA	EX60 /NS 7CE1 UL
65	100	18	2MMC9113WI CR SUL	7013 C SN24 TR SUL P3	HCB7013C.T.P4S.UL	C113HCUL	5S-7013UC T1 G/GL P42	7013CD/HCP4A GA	EX65 /NS 7CE1 UL
70	110	20	2MMC9114WI CR SUL	7014 C SN24 TR SUL P3	HCB7014C.T.P4S.UL	C114HCUL	5S-7014UC T1 G/GL P42	7014CD/HCP4A GA	EX70 /NS 7CE1 UL
75	115	20	2MMC9115WI CR SUL	7015 C SN24 TR SUL P3	HCB7015C.T.P4S.UL	C115HCUL	5S-7015UC T1 G/GL P42	7015CD/HCP4A GA	EX75 /NS 7CE1 UL
80	125	22	2MMC9116WI CR SUL	7016 C SN24 TR SUL P3	HCB7016C.T.P4S.UL	C116HCUL	5S-7016UC T1 G/GL P42	7016CD/HCP4A GA	EX80 /NS 7CE1 UL
85	130	22	2MMC9117WI CR SUL	7017 C SN24 TR SUL P3	HCB7017C.T.P4S.UL	C117HCUL	5S-7017UC T1 G/GL P42	7017CD/HCP4A GA	EX85 /NS 7CE1 UL
90	140	24	2MMC9118WI CR SUL	7018 C SN24 TR SUL P3	HCB7018C.T.P4S.UL	C118HCUL	5S-7018UC T1 G/GL P42	7018CD/HCP4A GA	EX90 /NS 7CE1 UL
95	145	24	2MMC9119WI CR SUL	7019 C SN24 TR SUL P3	HCB7019C.T.P4S.UL	C119HCUL	5S-7019UC T1 G/GL P42	7019CD/HCP4A GA	EX95 /NS 7CE1 UL
100	150	24	2MMC9120WI CR SUL	7020 C SN24 TR SUL P3	HCB7020C.T.P4S.UL	C120HCUL	5S-7020UC T1 G/GL P42	7020CD/HCP4A GA	EX100 /NS 7CE1 UL
105	160	26	2MMC9121WI CR SUL	7021 C SN24 TR SUL P3	HCB7021C.T.P4S.UL	C121HCUL	5S-7021UC T1 G/GL P42	7021CD/HCP4A GA	EX105 /NS 7CE1 UL
110	170	28	2MMC9122WI CR SUL	7022 C SN24 TR SUL P3	HCB7022C.T.P4S.UL	C122HCUL	5S-7022UC T1 G/GL P42	7022CD/HCP4A GA	EX110 /NS 7CE1 UL
120	180	28	2MMC9124WI CR SUL	7024 C SN24 TR SUL P3	HCB7024C.T.P4S.UL	C124HCUL	5S-7024UC T1 G/GL P42	7024CD/HCP4A GA	EX120 /NS 7CE1 UL

Timken Machine Tool

Spindle Bearing Interchange List



ISO 10 Series with a 25 deg Contact Angle and Steel Balls

Bore (mm)	O.D. (mm)	Width (mm)	Timken	NSK	FAG	Barden	NTN	SKF	SNFA
10	26	8	3MM9100WI CR SUL	7000 A5 TR SUL P3	B7000E.T.P4S.UL	100HEUL	7000UAD T1 G/GL P42	7000ACD/P4A GA	EX10 7CE3 UL
12	28	8	3MM9101WI CR SUL	7001 A5 TR SUL P3	B7001E.T.P4S.UL	101HEUL	7001UAD T1 G/GL P42	7001ACD/P4A GA	EX12 7CE3 UL
15	32	9	3MM9102WI CR SUL	7002 A5 TR SUL P3	B7002E.T.P4S.UL	102HEUL	7002UAD T1 G/GL P42	7002ACD/P4A GA	EX15 7CE3 UL
17	35	10	3MM9103WI CR SUL	7003 A5 TR SUL P3	B7003E.T.P4S.UL	103HEUL	7003UAD T1 G/GL P42	7003ACD/P4A GA	EX17 7CE3 UL
20	42	12	3MM9104WI CR SUL	7004 A5 TR SUL P3	B7004E.T.P4S.UL	104HEUL	7004UAD T1 G/GL P42	7004ACD/P4A GA	EX20 7CE3 UL
25	47	12	3MM9105WI CR SUL	7005 A5 TR SUL P3	B7005E.T.P4S.UL	105HEUL	7005UAD T1 G/GL P42	7005ACD/P4A GA	EX25 7CE3 UL
30	55	15	3MM9106WI CR SUL	7006 A5 TR SUL P3	B7006E.T.P4S.UL	106HEUL	7006UAD T1 G/GL P42	7006ACD/P4A GA	EX30 7CE3 UL
35	62	14	3MM9107WI CR SUL	7007 A5 TR SUL P3	B7007E.T.P4S.UL	107HEUL	7007UAD T1 G/GL P42	7007ACD/P4A GA	EX35 7CE3 UL
40	68	15	3MM9108WI CR SUL	7008 A5 TR SUL P3	B7008E.T.P4S.UL	108HEUL	7008UAD T1 G/GL P42	7008ACD/P4A GA	EX40 7CE3 UL
45	75	16	3MM9109WI CR SUL	7009 A5 TR SUL P3	B7009E.T.P4S.UL	109HEUL	7009UAD T1 G/GL P42	7009ACD/P4A GA	EX45 7CE3 UL
50	80	16	3MM9110WI CR SUL	7010 A5 TR SUL P3	B7010E.T.P4S.UL	110HEUL	7010UAD T1 G/GL P42	7010ACD/P4A GA	EX50 7CE3 UL
55	90	18	3MM9111WI CR SUL	7011 A5 TR SUL P3	B7011E.T.P4S.UL	111HEUL	7011UAD T1 G/GL P42	7011ACD/P4A GA	EX55 7CE3 UL
60	95	18	3MM9112WI CR SUL	7012 A5 TR SUL P3	B7012E.T.P4S.UL	112HEUL	7012UAD T1 G/GL P42	7012ACD/P4A GA	EX60 7CE3 UL
65	100	18	3MM9113WI CR SUL	7013 A5 TR SUL P3	B7013E.T.P4S.UL	113HEUL	7013UAD T1 G/GL P42	7013ACD/P4A GA	EX65 7CE3 UL
70	110	20	3MM9114WI CR SUL	7014 A5 TR SUL P3	B7014E.T.P4S.UL	114HEUL	7014UAD T1 G/GL P42	7014ACD/P4A GA	EX70 7CE3 UL
75	115	20	3MM9115WI CR SUL	7015 A5 TR SUL P3	B7015E.T.P4S.UL	115HEUL	7015UAD T1 G/GL P42	7015ACD/P4A GA	EX75 7CE3 UL
80	125	22	3MM9116WI CR SUL	7016 A5 TR SUL P3	B7016E.T.P4S.UL	116HEUL	7016UAD T1 G/GL P42	7016ACD/P4A GA	EX80 7CE3 UL
85	130	22	3MM9117WI CR SUL	7017 A5 TR SUL P3	B7017E.T.P4S.UL	117HEUL	7017UAD T1 G/GL P42	7017ACD/P4A GA	EX85 7CE3 UL
90	140	24	3MM9118WI CR SUL	7018 A5 TR SUL P3	B7018E.T.P4S.UL	118HEUL	7018UAD T1 G/GL P42	7018ACD/P4A GA	EX90 7CE3 UL
95	145	24	3MM9119WI CR SUL	7019 A5 TR SUL P3	B7019E.T.P4S.UL	119HEUL	7019UAD T1 G/GL P42	7019ACD/P4A GA	EX95 7CE3 UL
100	150	24	3MM9120WI CR SUL	7020 A5 TR SUL P3	B7020E.T.P4S.UL	120HEUL	7020UAD T1 G/GL P42	7020ACD/P4A GA	EX100 7CE3 UL
105	160	26	3MM9121WI CR SUL	7021 A5 TR SUL P3	B7021E.T.P4S.UL	121HEUL	7021UAD T1 G/GL P42	7021ACD/P4A GA	EX105 7CE3 UL
110	170	28	3MM9122WI CR SUL	7022 A5 TR SUL P3	B7022E.T.P4S.UL	122HEUL	7022UAD T1 G/GL P42	7022ACD/P4A GA	EX110 7CE3 UL
120	180	28	3MM9124WI CR SUL	7024 A5 TR SUL P3	B7024E.T.P4S.UL	124HEUL	7024UAD T1 G/GL P42	7024ACD/P4A GA	EX120 7CE3 UL

ISO 10 Series with a 25 deg Contact Angle and Ceramic Balls

10	26	8	3MMC9100WI CR SUL	7000 A5 SN24 TR SUL P3	HCB7000E.T.P4S.UL	C100HEUL	5S-7000UAD T1 G/GL P42	7000ACD/HCP4A GA	EX10 /NS 7CE3 UL
12	28	8	3MMC9101WI CR SUL	7001 A5 SN24 TR SUL P3	HCB7001E.T.P4S.UL	C101HEUL	5S-7001UAD T1 G/GL P42	7001ACD/HCP4A GA	EX12 /NS 7CE3 UL
15	32	9	3MMC9102WI CR SUL	7002 A5 SN24 TR SUL P3	HCB7002E.T.P4S.UL	C102HEUL	5S-7002UAD T1 G/GL P42	7002ACD/HCP4A GA	EX15 /NS 7CE3 UL
17	35	10	3MMC9103WI CR SUL	7003 A5 SN24 TR SUL P3	HCB7003E.T.P4S.UL	C103HEUL	5S-7003UAD T1 G/GL P42	7003ACD/HCP4A GA	EX17 /NS 7CE3 UL
20	42	12	3MMC9104WI CR SUL	7004 A5 SN24 TR SUL P3	HCB7004E.T.P4S.UL	C104HEUL	5S-7004UAD T1 G/GL P42	7004ACD/HCP4A GA	EX20 /NS 7CE3 UL
25	47	12	3MMC9105WI CR SUL	7005 A5 SN24 TR SUL P3	HCB7005E.T.P4S.UL	C105HEUL	5S-7005UAD T1 G/GL P42	7005ACD/HCP4A GA	EX25 /NS 7CE3 UL
30	55	15	3MMC9106WI CR SUL	7006 A5 SN24 TR SUL P3	HCB7006E.T.P4S.UL	C106HEUL	5S-7006UAD T1 G/GL P42	7006ACD/HCP4A GA	EX30 /NS 7CE3 UL
35	62	14	3MMC9107WI CR SUL	7007 A5 SN24 TR SUL P3	HCB7007E.T.P4S.UL	C107HEUL	5S-7007UAD T1 G/GL P42	7007ACD/HCP4A GA	EX35 /NS 7CE3 UL
40	68	15	3MMC9108WI CR SUL	7008 A5 SN24 TR SUL P3	HCB7008E.T.P4S.UL	C108HEUL	5S-7008UAD T1 G/GL P42	7008ACD/HCP4A GA	EX40 /NS 7CE3 UL
45	75	16	3MMC9109WI CR SUL	7009 A5 SN24 TR SUL P3	HCB7009E.T.P4S.UL	C109HEUL	5S-7009UAD T1 G/GL P42	7009ACD/HCP4A GA	EX45 /NS 7CE3 UL
50	80	16	3MMC9110WI CR SUL	7010 A5 SN24 TR SUL P3	HCB7010E.T.P4S.UL	C110HEUL	5S-7010UAD T1 G/GL P42	7010ACD/HCP4A GA	EX50 /NS 7CE3 UL
55	90	18	3MMC9111WI CR SUL	7011 A5 SN24 TR SUL P3	HCB7011E.T.P4S.UL	C111HEUL	5S-7011UAD T1 G/GL P42	7011ACD/HCP4A GA	EX55 /NS 7CE3 UL
60	95	18	3MMC9112WI CR SUL	7012 A5 SN24 TR SUL P3	HCB7012E.T.P4S.UL	C112HEUL	5S-7012UAD T1 G/GL P42	7012ACD/HCP4A GA	EX60 /NS 7CE3 UL
65	100	18	3MMC9113WI CR SUL	7013 A5 SN24 TR SUL P3	HCB7013E.T.P4S.UL	C113HEUL	5S-7013UAD T1 G/GL P42	7013ACD/HCP4A GA	EX65 /NS 7CE3 UL
70	110	20	3MMC9114WI CR SUL	7014 A5 SN24 TR SUL P3	HCB7014E.T.P4S.UL	C114HEUL	5S-7014UAD T1 G/GL P42	7014ACD/HCP4A GA	EX70 /NS 7CE3 UL
75	115	20	3MMC9115WI CR SUL	7015 A5 SN24 TR SUL P3	HCB7015E.T.P4S.UL	C115HEUL	5S-7015UAD T1 G/GL P42	7015ACD/HCP4A GA	EX75 /NS 7CE3 UL
80	125	22	3MMC9116WI CR SUL	7016 A5 SN24 TR SUL P3	HCB7016E.T.P4S.UL	C116HEUL	5S-7016UAD T1 G/GL P42	7016ACD/HCP4A GA	EX80 /NS 7CE3 UL
85	130	22	3MMC9117WI CR SUL	7017 A5 SN24 TR SUL P3	HCB7017E.T.P4S.UL	C117HEUL	5S-7017UAD T1 G/GL P42	7017ACD/HCP4A GA	EX85 /NS 7CE3 UL
90	140	24	3MMC9118WI CR SUL	7018 A5 SN24 TR SUL P3	HCB7018E.T.P4S.UL	C118HEUL	5S-7018UAD T1 G/GL P42	7018ACD/HCP4A GA	EX90 /NS 7CE3 UL
95	145	24	3MMC9119WI CR SUL	7019 A5 SN24 TR SUL P3	HCB7019E.T.P4S.UL	C119HEUL	5S-7019UAD T1 G/GL P42	7019ACD/HCP4A GA	EX95 /NS 7CE3 UL
100	150	24	3MMC9120WI CR SUL	7020 A5 SN24 TR SUL P3	HCB7020E.T.P4S.UL	C120HEUL	5S-7020UAD T1 G/GL P42	7020ACD/HCP4A GA	EX100 /NS 7CE3 UL
105	160	26	3MMC9121WI CR SUL	7021 A5 SN24 TR SUL P3	HCB7021E.T.P4S.UL	C121HEUL	5S-7021UAD T1 G/GL P42	7021ACD/HCP4A GA	EX105 /NS 7CE3 UL
110	170	28	3MMC9122WI CR SUL	7022 A5 SN24 TR SUL P3	HCB7022E.T.P4S.UL	C122HEUL	5S-7022UAD T1 G/GL P42	7022ACD/HCP4A GA	EX110 /NS 7CE3 UL
120	180	28	3MMC9124WI CR SUL	7024 A5 SN24 TR SUL P3	HCB7024E.T.P4S.UL	C124HEUL	5S-7024UAD T1 G/GL P42	7024ACD/HCP4A GA	EX120 /NS 7CE3 UL

TIMKEN

Timken Machine Tool

Spindle Bearing Interchange List



ISO 19 Series with a 15 deg Contact Angle and Steel Balls

ISO 19 Series with a 15 deg Contact Angle and Ceramic Balls

Bore (mm)	O.D. (mm)	Width (mm)	Timken	NSK	FAG	Barden	NTN	SKF	SNFA
10	22	6	2MM9300WI CR SUL		B71900C.T.P4S.UL	1900HCUL	7900UC T1 G/GL P42	71900CD/P4A GA	EB10 7CE1 UL
12	24	6	2MM9301WI CR SUL		B71901C.T.P4S.UL	1901HCUL	7901UC T1 G/GL P42	71901CD/P4A GA	EB12 7CE1 UL
15	28	7	2MM9302WI CR SUL		B71902C.T.P4S.UL	1902HCUL	7902UC T1 G/GL P42	71902CD/P4A GA	EB15 7CE1 UL
17	30	7	2MM9303WI CR SUL		B71903C.T.P4S.UL	1903HCUL	7903UC T1 G/GL P42	71903CD/P4A GA	EB17 7CE1 UL
20	37	9	2MM9304WI CR SUL		B71904C.T.P4S.UL	1904HCUL	7904UC T1 G/GL P42	71904CD/P4A GA	EB20 7CE1 UL
25	42	9	2MM9305WI CR SUL		B71905C.T.P4S.UL	1905HCUL	7905UC T1 G/GL P42	71905CD/P4A GA	EB25 7CE1 UL
30	47	9	2MM9306WI CR SUL		B71906C.T.P4S.UL	1906HCUL	7906UC T1 G/GL P42	71906CD/P4A GA	EB30 7CE1 UL
35	55	10	2MM9307WI CR SUL		B71907C.T.P4S.UL	1907HCUL	7907UC T1 G/GL P42	71907CD/P4A GA	EB35 7CE1 UL
40	62	12	2MM9308WI CR SUL		B71908C.T.P4S.UL	1908HCUL	7908UC T1 G/GL P42	71908CD/P4A GA	EB40 7CE1 UL
45	68	12	2MM9309WI CR SUL		B71909C.T.P4S.UL	1909HCUL	7909UC T1 G/GL P42	71909CD/P4A GA	EB45 7CE1 UL
50	72	12	2MM9310WI CR SUL		B71910C.T.P4S.UL	1910HCUL	7910UC T1 G/GLP42	71910CD/P4A GA	EB50 7CE1 UL
55	80	13	2MM9311WI CR SUL		B71911C.T.P4S.UL	1911HCUL	7911UC T1 G/GL P42	71911CD/P4A GA	EB55 7CE1 UL
60	85	13	2MM9312WI CR SUL		B71912C.T.P4S.UL	1912HCUL	7912UC T1 G/GL P42	71912CD/P4A GA	EB60 7CE1 UL
65	90	13	2MM9313WI CR SUL		B71913C.T.P4S.UL	1913HCUL	7913UC T1 G/GL P42	71913CD/P4A GA	EB65 7CE1 UL
70	100	16	2MM9314WI CR SUL		B71914C.T.P4S.UL	1914HCUL	7914UC T1 G/GL P42	71914CD/P4A GA	EB70 7CE1 UL
75	105	16	2MM9315WI CR SUL		B71915C.T.P4S.UL	1915HCUL	7915UC T1 G/GL P42	71915CD/P4A GA	EB75 7CE1 UL
80	110	16	2MM9316WI CR SUL		B71916C.T.P4S.UL	1916HCUL	7916UC T1 G/GL P42	71916CD/P4A GA	EB80 7CE1 UL
85	120	18	2MM9317WI CR SUL		B71917C.T.P4S.UL	1917HCUL	7917UC T1 G/GL P42	71917CD/P4A GA	EB85 7CE1 UL
90	125	18	2MM9318WI CR SUL		B71918C.T.P4S.UL	1918HCUL	7918UC T1 G/GL P42	71918CD/P4A GA	EB90 7CE1 UL
95	130	18	2MM9319WI CR SUL		B71919C.T.P4S.UL	1919HCUL	7919UC T1 G/GL P42	71919CD/P4A GA	EB95 7CE1 UL
100	140	20	2MM9320WI CR SUL		B71920C.T.P4S.UL	1920HCUL	7920UC T1 G/GL P42	71920CD/P4A GA	EB100 7CE1 UL
110	150	20	2MM9322WI CR SUL		B71922C.T.P4S.UL	1922HCUL	7922UC T1 G/GL P42	71922CD/P4A GA	EB110 7CE1 UL
120	165	22	2MM9324WI CR SUL		B71924C.T.P4S.UL		7924UC T1 G/GL P42	71924CD/P4A GA	EB120 7CE1 UL
130	180	24	2MM9326WI CR SUL		B71926C.T.P4S.UL		7926UC T1 G/GLP42	71926CD/P4A GA	EB130 7CE1 UL
140	190	24	2MM9328WI CR SUL		B71928C.T.P4S.UL		7928UCT1B G/GL P42	71928CD/P4A GA	EB140 7CE1 UL
150	210	28	2MM9330WI CR SUL		B71930C.T.P4S.UL		7930UCT1B G/GL P42	71930CD/P4A GA	EB150 7CE1 UL
10	22	6	2MMC9300WI CR SUL		HCB71900C.T.P4S.UL	C1900HCUL	5S-7900UC T1 G/GL P42	71900CD/HCP4A GA	EB10 /NS 7CE1 UL
12	24	6	2MMC9301WI CR SUL		HCB71901C.T.P4S.UL	C1901HCUL	5S-7901UC T1 G/GL P42	71901CD/HCP4A GA	EB12 /NS 7CE1 UL
15	28	7	2MMC9302WI CR SUL		HCB71902C.T.P4S.UL	C1902HCUL	5S-7902UC T1 G/GL P42	71902CD/HCP4A GA	EB15 /NS 7CE1 UL
17	30	7	2MMC9303WI CR SUL		HCB71903C.T.P4S.UL	C1903HCUL	5S-7903UC T1 G/GL P42	71903CD/HCP4A GA	EB17 /NS 7CE1 UL
20	37	9	2MMC9304WI CR SUL		HCB71904C.T.P4S.UL	C1904HCUL	5S-7904UC T1 G/GL P42	71904CD/HCP4A GA	EB20 /NS 7CE1 UL
25	42	9	2MMC9305WI CR SUL		HCB71905C.T.P4S.UL	C1905HCUL	5S-7905UC T1 G/GL P42	71905CD/HCP4A GA	EB25 /NS 7CE1 UL
30	47	9	2MMC9306WI CR SUL		HCB71906C.T.P4S.UL	C1906HCUL	5S-7906UC T1 G/GL P42	71906CD/HCP4A GA	EB30 /NS 7CE1 UL
35	55	10	2MMC9307WI CR SUL		HCB71907C.T.P4S.UL	C1907HCUL	5S-7907UC T1 G/GL P42	71907CD/HCP4A GA	EB35 /NS 7CE1 UL
40	62	12	2MMC9308WI CR SUL		HCB71908C.T.P4S.UL	C1908HCUL	5S-7908UC T1 G/GL P42	71908CD/HCP4A GA	EB40 /NS 7CE1 UL
45	68	12	2MMC9309WI CR SUL		HCB71909C.T.P4S.UL	C1909HCUL	5S-7909UC T1 G/GL P42	71909CD/HCP4A GA	EB45 /NS 7CE1 UL
50	72	12	2MMC9310WI CR SUL		HCB71910C.T.P4S.UL	C1910HCUL	5S-7910UC T1 G/GL P42	71910CD/HCP4A GA	EB50 /NS 7CE1 UL
55	80	13	2MMC9311WI CR SUL		HCB71911C.T.P4S.UL	C1911HCUL	5S-7911UC T1 G/GL P42	71911CD/HCP4A GA	EB55 /NS 7CE1 UL
60	85	13	2MMC9312WI CR SUL		HCB71912C.T.P4S.UL	C1912HCUL	5S-7912UC T1 G/GL P42	71912CD/HCP4A GA	EB60 /NS 7CE1 UL
65	90	13	2MMC9313WI CR SUL		HCB71913C.T.P4S.UL	C1913HCUL	5S-7913UC T1 G/GL P42	71913CD/HCP4A GA	EB65 /NS 7CE1 UL
70	100	16	2MMC9314WI CR SUL		HCB71914C.T.P4S.UL	C1914HCUL	5S-7914UC T1 G/GL P42	71914CD/HCP4A GA	EB70 /NS 7CE1 UL
75	105	16	2MMC9315WI CR SUL		HCB71915C.T.P4S.UL	C1915HCUL	5S-7915UC T1 G/GL P42	71915CD/HCP4A GA	EB75 /NS 7CE1 UL
80	110	16	2MMC9316WI CR SUL		HCB71916C.T.P4S.UL	C1916HCUL	5S-7916UC T1 G/GL P42	71916CD/HCP4A GA	EB80 /NS 7CE1 UL
85	120	18	2MMC9317WI CR SUL		HCB71917C.T.P4S.UL	C1917HCUL	5S-7917UC T1 G/GL P42	71917CD/HCP4A GA	EB85 /NS 7CE1 UL
90	125	18	2MMC9318WI CR SUL		HCB71918C.T.P4S.UL	C1918HCUL	5S-7918UC T1 G/GL P42	71918CD/HCP4A GA	EB90 /NS 7CE1 UL
95	130	18	2MMC9319WI CR SUL		HCB71919C.T.P4S.UL	C1919HCUL	5S-7919UC T1 G/GL P42	71919CD/HCP4A GA	EB95 /NS 7CE1 UL
100	140	20	2MMC9320WI CR SUL		HCB71920C.T.P4S.UL	C1920HCUL	5S-7920UC T1 G/GL P42	71920CD/HCP4A GA	EB100 /NS 7CE1 UL
110	150	20	2MMC9322WI CR SUL		HCB71922C.T.P4S.UL	C1922HCUL	5S-7922UC T1 G/GL P42	71922CD/HCP4A GA	EB110 /NS 7CE1 UL
120	165	22	2MMC9324WI CR SUL		HCB71924C.T.P4S.UL		5S-7924UC T1 G/GL P42	71924CD/HCP4A GA	EB120 /NS 7CE1 UL
130	180	24	2MMC9326WI CR SUL		HCB71926C.T.P4S.UL		5S-7926UC T1 G/GL P42	71926CD/HCP4A GA	EB130 /NS 7CE1 UL
140	190	24	2MMC9328WI CR SUL		HCB71928C.T.P4S.UL		5S-7928UC T1 G/GL P42	71928CD/HCP4A GA	EB140 /NS 7CE1 UL
150	210	28	2MMC9330WI CR SUL		HCB71930C.T.P4S.UL		5S-7930UC T1 G/GL P42	71930CD/HCP4A GA	EB150 /NS 7CE1 UL

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Spindle Bearing Interchange List



ISO 19 Series with a 25 deg Contact Angle and Steel Balls

ISO 19 Series with a 25 deg Contact Angle and Ceramic Balls

Bore (mm)	O.D. (mm)	Width (mm)	Timken	NSK	FAG	Barden	NTN	SKF	SNFA
10	22	6	3MM9300WI CR SUL		B71900E.T.P4S.UL	1900HEUL	7900UAD T1 G/GL P42	71900ACD/P4A GA	EB10 7CE3 UL
12	24	6	3MM9301WI CR SUL		B71901E.T.P4S.UL	1901HEUL	7901UAD T1 G/GL P42	71901ACD/P4A GA	EB12 7CE3 UL
15	28	7	3MM9302WI CR SUL		B71902E.T.P4S.UL	1902HEUL	7902UAD T1 G/GL P42	71902ACD/P4A GA	EB15 7CE3 UL
17	30	7	3MM9303WI CR SUL		B71903E.T.P4S.UL	1903HEUL	7903UAD T1 G/GL P42	71903ACD/P4A GA	EB17 7CE3 UL
20	37	9	3MM9304WI CR SUL		B71904E.T.P4S.UL	1904HEUL	7904UAD T1 G/GL P42	71904ACD/P4A GA	EB20 7CE3 UL
25	42	9	3MM9305WI CR SUL		B71905E.T.P4S.UL	1905HEUL	7905UAD T1 G/GL P42	71905ACD/P4A GA	EB25 7CE3 UL
30	47	9	3MM9306WI CR SUL		B71906E.T.P4S.UL	1906HEUL	7906UAD T1 G/GL P42	71906ACD/P4A GA	EB30 7CE3 UL
35	55	10	3MM9307WI CR SUL		B71907E.T.P4S.UL	1907HEUL	7907UAD T1 G/GL P42	71907ACD/P4A GA	EB35 7CE3 UL
40	62	12	3MM9308WI CR SUL		B71908E.T.P4S.UL	1908HEUL	7908UAD T1 G/GL P42	71908ACD/P4A GA	EB40 7CE3 UL
45	68	12	3MM9309WI CR SUL		B71909E.T.P4S.UL	1909HEUL	7909UAD T1 G/GL P42	71909ACD/P4A GA	EB45 7CE3 UL
50	72	12	3MM9310WI CR SUL		B71910E.T.P4S.UL	1910HEUL	7910UAD T1 G/GL P42	71910ACD/P4A GA	EB50 7CE3 UL
55	80	13	3MM9311WI CR SUL		B71911E.T.P4S.UL	1911HEUL	7911UAD T1 G/GL P42	71911ACD/P4A GA	EB55 7CE3 UL
60	85	13	3MM9312WI CR SUL		B71912E.T.P4S.UL	1912HEUL	7912UAD T1 G/GL P42	71912ACD/P4A GA	EB60 7CE3 UL
65	90	13	3MM9313WI CR SUL		B71913E.T.P4S.UL	1913HEUL	7913UAD T1 G/GL P42	71913ACD/P4A GA	EB65 7CE3 UL
70	100	16	3MM9314WI CR SUL		B71914E.T.P4S.UL	1914HEUL	7914UAD T1 G/GL P42	71914ACD/P4A GA	EB70 7CE3 UL
75	105	16	3MM9315WI CR SUL		B71915E.T.P4S.UL	1915HEUL	7915UAD T1 G/GL P42	71915ACD/P4A GA	EB75 7CE3 UL
80	110	16	3MM9316WI CR SUL		B71916E.T.P4S.UL	1916HEUL	7916UAD T1 G/GL P42	71916ACD/P4A GA	EB80 7CE3 UL
85	120	18	3MM9317WI CR SUL		B71917E.T.P4S.UL	1917HEUL	7917UAD T1 G/GL P42	71917ACD/P4A GA	EB85 7CE3 UL
90	125	18	3MM9318WI CR SUL		B71918E.T.P4S.UL	1918HEUL	7918UAD T1 G/GL P42	71918ACD/P4A GA	EB90 7CE3 UL
95	130	18	3MM9319WI CR SUL		B71919E.T.P4S.UL	1919HEUL	7919UAD T1 G/GL P42	71919ACD/P4A GA	EB95 7CE3 UL
100	140	20	3MM9320WI CR SUL		B71920E.T.P4S.UL	1920HEUL	7920UAD T1 G/GL P42	71920ACD/P4A GA	EB100 7CE3 UL
110	150	20	3MM9322WI CR SUL		B71922E.T.P4S.UL	1922HEUL	7922UAD T1 G/GL P42	71922ACD/P4A GA	EB110 7CE3 UL
120	165	22	3MM9324WI CR SUL		B71924E.T.P4S.UL		7924UAD T1 G/GL P42	71924ACD/P4A GA	EB120 7CE3 UL
130	180	24	3MM9326WI CR SUL		B71926E.T.P4S.UL		7926UAD T1 G/GL P42	71926ACD/P4A GA	EB130 7CE3 UL
140	190	24	3MM9328WI CR SUL		B71928E.T.P4S.UL			71928ACD/P4A GA	EB140 7CE3 UL
150	210	28	3MM9330WI CR SUL		B71930E.T.P4S.UL			71930ACD/P4A GA	EB150 7CE3 UL
10	22	6	3MMC9300WI CR SUL		HCB71900E.T.P4S.UL	C1900HEUL	5S-7900UAD T1 G/GL P42	71900ACD/HCP4A GA	EB10 /NS 7CE3 UL
12	24	6	3MMC9301WI CR SUL		HCB71901E.T.P4S.UL	C1901HEUL	5S-7901UAD T1 G/GL P42	71901ACD/HCP4A GA	EB12 /NS 7CE3 UL
15	28	7	3MMC9302WI CR SUL		HCB71902E.T.P4S.UL	C1902HEUL	5S-7902UAD T1 G/GL P42	71902ACD/HCP4A GA	EB15 /NS 7CE3 UL
17	30	7	3MMC9303WI CR SUL		HCB71903E.T.P4S.UL	C1903HEUL	5S-7903UAD T1 G/GL P42	71903ACD/HCP4A GA	EB17 /NS 7CE3 UL
20	37	9	3MMC9304WI CR SUL		HCB71904E.T.P4S.UL	C1904HEUL	5S-7904UAD T1 G/GL P42	71904ACD/HCP4A GA	EB20 /NS 7CE3 UL
25	42	9	3MMC9305WI CR SUL		HCB71905E.T.P4S.UL	C1905HEUL	5S-7905UAD T1 G/GL P42	71905ACD/HCP4A GA	EB25 /NS 7CE3 UL
30	47	9	3MMC9306WI CR SUL		HCB71906E.T.P4S.UL	C1906HEUL	5S-7906UAD T1 G/GL P42	71906ACD/HCP4A GA	EB30 /NS 7CE3 UL
35	55	10	3MMC9307WI CR SUL		HCB71907E.T.P4S.UL	C1907HEUL	5S-7907UAD T1 G/GL P42	71907ACD/HCP4A GA	EB35 /NS 7CE3 UL
40	62	12	3MMC9308WI CR SUL		HCB71908E.T.P4S.UL	C1908HEUL	5S-7908UAD T1 G/GL P42	71908ACD/HCP4A GA	EB40 /NS 7CE3 UL
45	68	12	3MMC9309WI CR SUL		HCB71909E.T.P4S.UL	C1909HEUL	5S-7909UAD T1 G/GL P42	71909ACD/HCP4A GA	EB45 /NS 7CE3 UL
50	72	12	3MMC9310WI CR SUL		HCB71910E.T.P4S.UL	C1910HEUL	5S-7910UAD T1 G/GL P42	71910ACD/HCP4A GA	EB50 /NS 7CE3 UL
55	80	13	3MMC9311WI CR SUL		HCB71911E.T.P4S.UL	C1911HEUL	5S-7911UAD T1 G/GL P42	71911ACD/HCP4A GA	EB55 /NS 7CE3 UL
60	85	13	3MMC9312WI CR SUL		HCB71912E.T.P4S.UL	C1912HEUL	5S-7912UAD T1 G/GL P42	71912ACD/HCP4A GA	EB60 /NS 7CE3 UL
65	90	13	3MMC9313WI CR SUL		HCB71913E.T.P4S.UL	C1913HEUL	5S-7913UAD T1 G/GL P42	71913ACD/HCP4A GA	EB65 /NS 7CE3 UL
70	100	16	3MMC9314WI CR SUL		HCB71914E.T.P4S.UL	C1914HEUL	5S-7914UAD T1 G/GL P42	71914ACD/HCP4A GA	EB70 /NS 7CE3 UL
75	105	16	3MMC9315WI CR SUL		HCB71915E.T.P4S.UL	C1915HEUL	5S-7915UAD T1 G/GL P42	71915ACD/HCP4A GA	EB75 /NS 7CE3 UL
80	110	16	3MMC9316WI CR SUL		HCB71916E.T.P4S.UL	C1916HEUL	5S-7916UAD T1 G/GL P42	71916ACD/HCP4A GA	EB80 /NS 7CE3 UL
85	120	18	3MMC9317WI CR SUL		HCB71917E.T.P4S.UL	C1917HEUL	5S-7917UAD T1 G/GL P42	71917ACD/HCP4A GA	EB85 /NS 7CE3 UL
90	125	18	3MMC9318WI CR SUL		HCB71918E.T.P4S.UL	C1918HEUL	5S-7918UAD T1 G/GL P42	71918ACD/HCP4A GA	EB90 /NS 7CE3 UL
95	130	18	3MMC9319WI CR SUL		HCB71919E.T.P4S.UL	C1919HEUL	5S-7919UAD T1 G/GL P42	71919ACD/HCP4A GA	EB95 /NS 7CE3 UL
100	140	20	3MMC9320WI CR SUL		HCB71920E.T.P4S.UL	C1920HEUL	5S-7920UAD T1 G/GL P42	71920ACD/HCP4A GA	EB100 /NS 7CE3 UL
110	150	20	3MMC9322WI CR SUL		HCB71922E.T.P4S.UL	C1922HEUL	5S-7922UAD T1 G/GL P42	71922ACD/HCP4A GA	EB110 /NS 7CE3 UL
120	165	22	3MMC9324WI CR SUL		HCB71924E.T.P4S.UL		5S-7924UAD T1 G/GL P42	71924ACD/HCP4A GA	EB120 /NS 7CE3 UL
130	180	24	3MMC9326WI CR SUL		HCB71926E.T.P4S.UL		5S-7926UAD T1 G/GL P42	71926ACD/HCP4A GA	EB130 /NS 7CE3 UL
140	190	24	3MMC9328WI CR SUL		HCB71928E.T.P4S.UL			71928ACD/HCP4A GA	EB140 /NS 7CE3 UL
150	210	28	3MMC9330WI CR SUL		HCB71930E.T.P4S.UL			71930ACD/HCP4A GA	EB150 /NS 7CE3 UL

Timken Machine Tool

Spindle Bearing Interchange List



ISO O2 Series with a 15 deg Contact Angle and Steel Balls

ISO O2 Series with a 15 deg Contact Angle and Ceramic Balls

Bore (mm)	O.D. (mm)	Width (mm)	Timken	NSK	FAG	Barden	NTN	SKF	SNFA
10	30	9	2MM200WI CR SUL	7200 C TR SUL P3	B7200C.T.P4S.UL	200HCUL	7200C T1 G/GL P42	7200CD/P4A GA	E210 7CE1 UL
12	32	10	2MM201WI CR SUL	7201 C TR SUL P3	B7201C.T.P4S.UL	201HCUL	7201C T1 G/GL P42	7201CD/P4A GA	E212 7CE1 UL
15	35	11	2MM202WI CR SUL	7202 C TR SUL P3	B7202C.T.P4S.UL	202HCUL	7202C T1 G/GL P42	7202CD/P4A GA	E215 7CE1 UL
17	40	12	2MM203WI CR SUL	7203 C TR SUL P3	B7203C.T.P4S.UL	203HCUL	7203C T1 G/GL P42	7203CD/P4A GA	E217 7CE1 UL
20	47	14	2MM204WI CR SUL	7204 C TR SUL P3	B7204C.T.P4S.UL	204HCUL	7204C T1 G/GL P42	7204CD/P4A GA	E220 7CE1 UL
25	52	15	2MM205WI CR SUL	7205 C TR SUL P3	B7205C.T.P4S.UL	205HCUL	7205C T1 G/GL P42	7205CD/P4A GA	E225 7CE1 UL
30	62	16	2MM206WI CR SUL	7206 C TR SUL P3	B7206C.T.P4S.UL	206HCUL	7206C T1 G/GL P42	7206CD/P4A GA	E230 7CE1 UL
35	72	17	2MM207WI CR SUL	7207 C TR SUL P3	B7207C.T.P4S.UL	207HCUL	7207C T1 G/GL P42	7207CD/P4A GA	E235 7CE1 UL
40	80	18	2MM208WI CR SUL	7208 C TR SUL P3	B7208C.T.P4S.UL	208HCUL	7208C T1 G/GL P42	7208CD/P4A GA	E240 7CE1 UL
45	85	19	2MM209WI CR SUL	7209 C TR SUL P3	B7209C.T.P4S.UL	209HCUL	7209C T1 G/GL P42	7209CD/P4A GA	E245 7CE1 UL
50	90	20	2MM210WI CR SUL	7210 C TR SUL P3	B7210C.T.P4S.UL	210HCUL	7210C T1 G/GL P42	7210CD/P4A GA	E250 7CE1 UL
55	100	21	2MM211WI CR SUL	7211 C TR SUL P3	B7211C.T.P4S.UL	211HCUL	7211C T1 G/GL P42	7211CD/P4A GA	E255 7CE1 UL
60	110	22	2MM212WI CR SUL	7212 C TR SUL P3	B7212C.T.P4S.UL	212HCUL	7212C T1 G/GL P42	7212CD/P4A GA	E260 7CE1 UL
65	120	23	2MM213WI CR SUL	7213 C TR SUL P3	B7213C.T.P4S.UL	213HCUL	7213C T1 G/GL P42	7213CD/P4A GA	E265 7CE1 UL
70	125	24	2MM214WI CR SUL	7214 C TR SUL P3	B7214C.T.P4S.UL	214HCUL	7214C T1 G/GL P42	7214CD/P4A GA	E270 7CE1 UL
75	130	25	2MM215WI CR SUL	7215 C TR SUL P3	B7215C.T.P4S.UL	215HCUL	7215C T1 G/GL P42	7215CD/P4A GA	E275 7CE1 UL
80	140	26	2MM216WI CR SUL	7216 C TR SUL P3	B7216C.T.P4S.UL	216HCUL	7216C T1 G/GL P42	7216CD/P4A GA	E280 7CE1 UL
85	150	28	2MM217WI CR SUL	7217 C TR SUL P3	B7217C.T.P4S.UL	217HCUL	7217C T1 G/GL P42	7217CD/P4A GA	E285 7CE1 UL
90	160	30	2MM218WI CR SUL	7218 C TR SUL P3	B7218C.T.P4S.UL	218HCUL	7218C T1 G/GL P42	7218CD/P4A GA	E290 7CE1 UL
95	170	32	2MM219WI CR SUL	7219 C TR SUL P3	B7219C.T.P4S.UL	219HCUL	7219C T1 G/GL P42	7219CD/P4A GA	E295 7CE1 UL
100	180	34	2MM220WI CR SUL	7220 C TR SUL P3	B7220C.T.P4S.UL	220HCUL	7220C T1 G/GL P42	7220CD/P4A GA	E200/100 7CE1 UL
105	190	36	2MM221WI CR SUL	7221 C TR SUL P3	B7221C.T.P4S.UL	221HCUL	7221CT1B G/GL P42	7221CD/P4A GA	E200/105 7CE1 UL
110	200	38	2MM222WI CR SUL	7222 C TR SUL P3	B7222C.T.P4S.UL	222HCUL	7222CT1B G/GL P42	7222CD/P4A GA	E200/110 7CE1 UL
120	215	40	2MM224WI CR SUL	7224 C TR SUL P3	B7224C.T.P4S.UL	224HCUL	7224CT1B G/GL P42	7224CD/P4A GA	E200/120 7CE1 UL
10	30	9	2MMC200WI CR SUL	7200 C SN24 TR SUL P3	HCB7200C.T.P4S.UL	C200HCUL	5S-7200C T1 G/GL P42	7200CD/HCP4A GA	E210 /NS 7CE1 UL
12	32	10	2MMC201WI CR SUL	7201 C SN24 TR SUL P3	HCB7201C.T.P4S.UL	C201HCUL	5S-7201C T1 G/GL P42	7201CD/HCP4A GA	E212 /NS 7CE1 UL
15	35	11	2MMC202WI CR SUL	7202 C SN24 TR SUL P3	HCB7202C.T.P4S.UL	C202HCUL	5S-7202C T1 G/GL P42	7202CD/HCP4A GA	E215 /NS 7CE1 UL
17	40	12	2MMC203WI CR SUL	7203 C SN24 TR SUL P3	HCB7203C.T.P4S.UL	C203HCUL	5S-7203C T1 G/GL P42	7203CD/HCP4A GA	E217 /NS 7CE1 UL
20	47	14	2MMC204WI CR SUL	7204 C SN24 TR SUL P3	HCB7204C.T.P4S.UL	C204HCUL	5S-7204C T1 G/GL P42	7204CD/HCP4A GA	E220 /NS 7CE1 UL
25	52	15	2MMC205WI CR SUL	7205 C SN24 TR SUL P3	HCB7205C.T.P4S.UL	C205HCUL	5S-7205C T1 G/GL P42	7205CD/HCP4A GA	E225 /NS 7CE1 UL
30	62	16	2MMC206WI CR SUL	7206 C SN24 TR SUL P3	HCB7206C.T.P4S.UL	C206HCUL	5S-7206C T1 G/GL P42	7206CD/HCP4A GA	E230 /NS 7CE1 UL
35	72	17	2MMC207WI CR SUL	7207 C SN24 TR SUL P3	HCB7207C.T.P4S.UL	C207HCUL	5S-7207C T1 G/GL P42	7207CD/HCP4A GA	E235 /NS 7CE1 UL
40	80	18	2MMC208WI CR SUL	7208 C SN24 TR SUL P3	HCB7208C.T.P4S.UL	C208HCUL	5S-7208C T1 G/GL P42	7208CD/HCP4A GA	E240 /NS 7CE1 UL
45	85	19	2MMC209WI CR SUL	7209 C SN24 TR SUL P3	HCB7209C.T.P4S.UL	C209HCUL	5S-7209C T1 G/GL P42	7209CD/HCP4A GA	E245 /NS 7CE1 UL
50	90	20	2MMC210WI CR SUL	7210 C SN24 TR SUL P3	HCB7210C.T.P4S.UL	C210HCUL	5S-7210C T1 G/GL P42	7210CD/HCP4A GA	E250 /NS 7CE1 UL
55	100	21	2MMC211WI CR SUL	7211 C SN24 TR SUL P3	HCB7211C.T.P4S.UL	C211HCUL	5S-7211C T1 G/GL P42	7211CD/HCP4A GA	E255 /NS 7CE1 UL
60	110	22	2MMC212WI CR SUL	7212 C SN24 TR SUL P3	HCB7212C.T.P4S.UL	C212HCUL	5S-7212C T1 G/GL P42	7212CD/HCP4A GA	E260 /NS 7CE1 UL
65	120	23	2MMC213WI CR SUL	7213 C SN24 TR SUL P3	HCB7213C.T.P4S.UL	C213HCUL	5S-7213C T1 G/GL P42	7213CD/HCP4A GA	E265 /NS 7CE1 UL
70	125	24	2MMC214WI CR SUL	7214 C SN24 TR SUL P3	HCB7214C.T.P4S.UL	C214HCUL	5S-7214C T1 G/GL P42	7214CD/HCP4A GA	E270 /NS 7CE1 UL
75	130	25	2MMC215WI CR SUL	7215 C SN24 TR SUL P3	HCB7215C.T.P4S.UL	C215HCUL	5S-7215C T1 G/GL P42	7215CD/HCP4A GA	E275 /NS 7CE1 UL
80	140	26	2MMC216WI CR SUL	7216 C SN24 TR SUL P3	HCB7216C.T.P4S.UL	C216HCUL	5S-7216C T1 G/GL P42	7216CD/HCP4A GA	E280 /NS 7CE1 UL
85	150	28	2MMC217WI CR SUL	7217 C SN24 TR SUL P3	HCB7217C.T.P4S.UL	C217HCUL	5S-7217C T1 G/GL P42	7217CD/HCP4A GA	E285 /NS 7CE1 UL
90	160	30	2MMC218WI CR SUL	7218 C SN24 TR SUL P3	HCB7218C.T.P4S.UL	C218HCUL	5S-7218C T1 G/GL P42	7218CD/HCP4A GA	E290 /NS 7CE1 UL
95	170	32	2MMC219WI CR SUL	7219 C SN24 TR SUL P3	HCB7219C.T.P4S.UL	C219HCUL	5S-7219C T1 G/GL P42	7219CD/HCP4A GA	E295 /NS 7CE1 UL
100	180	34	2MMC220WI CR SUL	7220 C SN24 TR SUL P3	HCB7220C.T.P4S.UL	C220HCUL	5S-7220C T1 G/GL P42	7220CD/HCP4A GA	E200/100 /NS 7CE1 UL
105	190	36	2MMC221WI CR SUL	7221 C SN24 TR SUL P3	HCB7221C.T.P4S.UL	C221HCUL	5S-7221CT1B G/GL P42	7221CD/HCP4A GA	E200/105 /NS 7CE1 UL
110	200	38	2MMC222WI CR SUL	7222 C SN24 TR SUL P3	HCB7222C.T.P4S.UL	C222HCUL	5S-7222CT1B G/GL P42	7222CD/HCP4A GA	E200/110 /NS 7CE1 UL
120	215	40	2MMC224WI CR SUL	7224 C SN24 TR SUL P3	HCB7224C.T.P4S.UL	C224HCUL	5S-7224CT1B G/GL P42	7224CD/HCP4A GA	E200/120 /NS 7CE1 UL

Timken Machine Tool

Spindle Bearing Interchange List



ISO 02 Series with a 25 deg Contact Angle and Steel Balls

Bore (mm)	O.D. (mm)	Width (mm)	Timken	NSK	FAG	Barden	NTN	SKF	SNFA
10	30	9	3MM200WI CR SUL	7200 A5 TR SUL P3	B7200E.T.P4S.UL	200HEUL	7200AD T1 G/GL P42	7200ACD/P4A GA	E210 7CE3 UL
12	32	10	3MM201WI CR SUL	7201 A5 TR SUL P3	B7201E.T.P4S.UL	201HEUL	7201AD T1 G/GL P42	7201ACD/P4A GA	E212 7CE3 UL
15	35	11	3MM202WI CR SUL	7202 A5 TR SUL P3	B7202E.T.P4S.UL	202HEUL	7202AD T1 G/GL P42	7202ACD/P4A GA	E215 7CE3 UL
17	40	12	3MM203WI CR SUL	7203 A5 TR SUL P3	B7203E.T.P4S.UL	203HEUL	7203AD T1 G/GL P42	7203ACD/P4A GA	E217 7CE3 UL
20	47	14	3MM204WI CR SUL	7204 A5 TR SUL P3	B7204E.T.P4S.UL	204HEUL	7204AD T1 G/GL P42	7204ACD/P4A GA	E220 7CE3 UL
25	52	15	3MM205WI CR SUL	7205 A5 TR SUL P3	B7205E.T.P4S.UL	205HEUL	7205AD T1 G/GL P42	7205ACD/P4A GA	E225 7CE3 UL
30	62	16	3MM206WI CR SUL	7206 A5 TR SUL P3	B7206E.T.P4S.UL	206HEUL	7206AD T1 G/GL P42	7206ACD/P4A GA	E230 7CE3 UL
35	72	17	3MM207WI CR SUL	7207 A5 TR SUL P3	B7207E.T.P4S.UL	207HEUL	7207AD T1 G/GL P42	7207ACD/P4A GA	E235 7CE3 UL
40	80	18	3MM208WI CR SUL	7208 A5 TR SUL P3	B7208E.T.P4S.UL	208HEUL	7208AD T1 G/GL P42	7208ACD/P4A GA	E240 7CE3 UL
45	85	19	3MM209WI CR SUL	7209 A5 TR SUL P3	B7209E.T.P4S.UL	209HEUL	7209AD T1 G/GL P42	7209ACD/P4A GA	E245 7CE3 UL
50	90	20	3MM210WI CR SUL	7210 A5 TR SUL P3	B7210E.T.P4S.UL	210HEUL	7210AD T1 G/GL P42	7210ACD/P4A GA	E250 7CE3 UL
55	100	21	3MM211WI CR SUL	7211 A5 TR SUL P3	B7211E.T.P4S.UL	211HEUL	7211AD T1 G/GL P42	7211ACD/P4A GA	E255 7CE3 UL
60	110	22	3MM212WI CR SUL	7212 A5 TR SUL P3	B7212E.T.P4S.UL	212HEUL	7212AD T1 G/GL P42	7212ACD/P4A GA	E260 7CE3 UL
65	120	23	3MM213WI CR SUL	7213 A5 TR SUL P3	B7213E.T.P4S.UL	213HEUL	7213AD T1 G/GL P42	7213ACD/P4A GA	E265 7CE3 UL
70	125	24	3MM214WI CR SUL	7214 A5 TR SUL P3	B7214E.T.P4S.UL	214HEUL	7214AD T1 G/GL P42	7214ACD/P4A GA	E270 7CE3 UL
75	130	25	3MM215WI CR SUL	7215 A5 TR SUL P3	B7215E.T.P4S.UL	215HEUL	7215AD T1 G/GL P42	7215ACD/P4A GA	E275 7CE3 UL
80	140	26	3MM216WI CR SUL	7216 A5 TR SUL P3	B7216E.T.P4S.UL	216HEUL	7216AD T1 G/GL P42	7216ACD/P4A GA	E280 7CE3 UL
85	150	28	3MM217WI CR SUL	7217 A5 TR SUL P3	B7217E.T.P4S.UL	217HEUL	7217AD T1 G/GL P42	7217ACD/P4A GA	E285 7CE3 UL
90	160	30	3MM218WI CR SUL	7218 A5 TR SUL P3	B7218E.T.P4S.UL	218HEUL	7218AD T1 G/GL P42	7218ACD/P4A GA	E290 7CE3 UL
95	170	32	3MM219WI CR SUL	7219 A5 TR SUL P3	B7219E.T.P4S.UL	219HEUL	7219AD T1 G/GL P42	7219ACD/P4A GA	E295 7CE3 UL
100	180	34	3MM220WI CR SUL	7220 A5 TR SUL P3	B7220E.T.P4S.UL	220HEUL	7220AD T1 G/GL P42	7220ACD/P4A GA	E200/100 7CE3 UL
105	190	36	3MM221WI CR SUL	7221 A5 TR SUL P3	B7221E.T.P4S.UL	221HEUL	7221AD T1 G/GL P42	7221ACD/P4A GA	E200/105 7CE3 UL
110	200	38	3MM222WI CR SUL	7222 A5 TR SUL P3	B7222E.T.P4S.UL	222HEUL	7222AD T1 G/GL P42	7222ACD/P4A GA	E200/110 7CE3 UL
120	215	40	3MM224WI CR SUL	7224 A5 TR SUL P3	B7224E.T.P4S.UL	224HEUL	7224AD T1 G/GL P42	7224ACD/P4A GA	E200/120 7CE3 UL

ISO 02 Series with a 25 deg Contact Angle and Ceramic Balls

10	30	9	3MMC200WI CR SUL	7200 A5 SN24 TR SUL P3	HCB7200E.T.P4S.UL	C200HEUL	5S-7200AD T1 G/GL P42	7200ACD/HCP4A GA	E210 /NS 7CE3 UL
12	32	10	3MMC201WI CR SUL	7201 A5 SN24 TR SUL P3	HCB7201E.T.P4S.UL	C201HEUL	5S-7201AD T1 G/GL P42	7201ACD/HCP4A GA	E212 /NS 7CE3 UL
15	35	11	3MMC202WI CR SUL	7202 A5 SN24 TR SUL P3	HCB7202E.T.P4S.UL	C202HEUL	5S-7202AD T1 G/GL P42	7202ACD/HCP4A GA	E215 /NS 7CE3 UL
17	40	12	3MMC203WI CR SUL	7203 A5 SN24 TR SUL P3	HCB7203E.T.P4S.UL	C203HEUL	5S-7203AD T1 G/GL P42	7203ACD/HCP4A GA	E217 /NS 7CE3 UL
20	47	14	3MMC204WI CR SUL	7204 A5 SN24 TR SUL P3	HCB7204E.T.P4S.UL	C204HEUL	5S-7204AD T1 G/GL P42	7204ACD/HCP4A GA	E220 /NS 7CE3 UL
25	52	15	3MMC205WI CR SUL	7205 A5 SN24 TR SUL P3	HCB7205E.T.P4S.UL	C205HEUL	5S-7205AD T1 G/GL P42	7205ACD/HCP4A GA	E225 /NS 7CE3 UL
30	62	16	3MMC206WI CR SUL	7206 A5 SN24 TR SUL P3	HCB7206E.T.P4S.UL	C206HEUL	5S-7206AD T1 G/GL P42	7206ACD/HCP4A GA	E230 /NS 7CE3 UL
35	72	17	3MMC207WI CR SUL	7207 A5 SN24 TR SUL P3	HCB7207E.T.P4S.UL	C207HEUL	5S-7207AD T1 G/GL P42	7207ACD/HCP4A GA	E235 /NS 7CE3 UL
40	80	18	3MMC208WI CR SUL	7208 A5 SN24 TR SUL P3	HCB7208E.T.P4S.UL	C208HEUL	5S-7208AD T1 G/GL P42	7208ACD/HCP4A GA	E240 /NS 7CE3 UL
45	85	19	3MMC209WI CR SUL	7209 A5 SN24 TR SUL P3	HCB7209E.T.P4S.UL	C209HEUL		7209ACD/HCP4A GA	E245 /NS 7CE3 UL
50	90	20	3MMC210WI CR SUL	7210 A5 SN24 TR SUL P3	HCB7210E.T.P4S.UL	C210HEUL	5S-7210AD T1 G/GL P42	7210ACD/HCP4A GA	E250 /NS 7CE3 UL
55	100	21	3MMC211WI CR SUL	7211 A5 SN24 TR SUL P3	HCB7211E.T.P4S.UL	C211HEUL	5S-7211AD T1 G/GL P42	7211ACD/HCP4A GA	E255 /NS 7CE3 UL
60	110	22	3MMC212WI CR SUL	7212 A5 SN24 TR SUL P3	HCB7212E.T.P4S.UL	C212HEUL	5S-7212AD T1 G/GL P42	7212ACD/HCP4A GA	E260 /NS 7CE3 UL
65	120	23	3MMC213WI CR SUL	7213 A5 SN24 TR SUL P3	HCB7213E.T.P4S.UL	C213HEUL	5S-7213AD T1 G/GL P42	7213ACD/HCP4A GA	E265 /NS 7CE3 UL
70	125	24	3MMC214WI CR SUL	7214 A5 SN24 TR SUL P3	HCB7214E.T.P4S.UL	C214HEUL	5S-7214AD T1 G/GL P42	7214ACD/HCP4A GA	E270 /NS 7CE3 UL
75	130	25	3MMC215WI CR SUL	7215 A5 SN24 TR SUL P3	HCB7215E.T.P4S.UL	C215HEUL	5S-7215AD T1 G/GL P42	7215ACD/HCP4A GA	E275 /NS 7CE3 UL
80	140	26	3MMC216WI CR SUL	7216 A5 SN24 TR SUL P3	HCB7216E.T.P4S.UL	C216HEUL		7216ACD/HCP4A GA	E280 /NS 7CE3 UL
85	150	28	3MMC217WI CR SUL	7217 A5 SN24 TR SUL P3	HCB7217E.T.P4S.UL	C217HEUL	5S-7217AD T1 G/GL P42	7217ACD/HCP4A GA	E285 /NS 7CE3 UL
90	160	30	3MMC218WI CR SUL	7218 A5 SN24 TR SUL P3	HCB7218E.T.P4S.UL	C218HEUL		7218ACD/HCP4A GA	E290 /NS 7CE3 UL
95	170	32	3MMC219WI CR SUL	7219 A5 SN24 TR SUL P3	HCB7219E.T.P4S.UL	C219HEUL	5S-7219AD T1 G/GL P42	7219ACD/HCP4A GA	E295 /NS 7CE3 UL
100	180	34	3MMC220WI CR SUL	7220 A5 SN24 TR SUL P3	HCB7220E.T.P4S.UL	C220HEUL		7220ACD/HCP4A GA	E200/100 /NS 7CE3 UL
105	190	36	3MMC221WI CR SUL	7221 A5 SN24 TR SUL P3	HCB7221E.T.P4S.UL	C221HEUL	5S-7221AD T1 G/GL P42	7221ACD/HCP4A GA	E200/105 /NS 7CE3 UL
110	200	38	3MMC222WI CR SUL	7222 A5 SN24 TR SUL P3	HCB7222E.T.P4S.UL	C222HEUL	5S-7222AD T1 G/GL P42	7222ACD/HCP4A GA	E200/110 /NS 7CE3 UL
120	215	40	3MMC224WI CR SUL	7224 A5 SN24 TR SUL P3	HCB7224E.T.P4S.UL	C224HEUL	5S-7224AD T1 G/GL P42	7224ACD/HCP4A GA	E200/120 /NS 7CE3 UL

TIMKEN

Timken Machine Tool

Spindle Bearing Interchange List



ISO 03 Series with a 15 deg Contact Angle and Steel Balls

ISO 03 Series with a 15 deg Contact Angle and Ceramic Balls

Bore (mm)	O.D. (mm)	Width (mm)	Timken	NSK	FAG	Barden	NTN	SKF	SNFA
10	35	11	2MM300WI CR SUL	7300 C TR SUL P3	B7300C.T.P4S.UL	300HCUL	7300C T1 G/GL P42	7300CD/P4A GA	
12	37	12	2MM301WI CR SUL	7301 C TR SUL P3	B7301C.T.P4S.UL	301HCUL	7301C T1 G/GL P42	7301CD/P4A GA	
15	42	13	2MM302WI CR SUL	7302 C TR SUL P3	B7302C.T.P4S.UL	302HCUL	7302C T1 G/GL P42	7302CD/P4A GA	
17	47	14	2MM303WI CR SUL	7303 C TR SUL P3	B7303C.T.P4S.UL	303HCUL	7303C T1 G/GL P42	7303CD/P4A GA	
20	52	15	2MM304WI CR SUL	7304 C TR SUL P3	B7304C.T.P4S.UL	304HCUL	7304C T1 G/GL P42	7304CD/P4A GA	
25	62	17	2MM305WI CR SUL	7305 C TR SUL P3	B7305C.T.P4S.UL	305HCUL	7305C T1 G/GL P42	7305CD/P4A GA	
30	72	19	2MM306WI CR SUL	7306 C TR SUL P3	B7306C.T.P4S.UL	306HCUL	7306C T1 G/GL P42	7306CD/P4A GA	
35	80	21	2MM307WI CR SUL	7307 C TR SUL P3	B7307C.T.P4S.UL	307HCUL	7307C T1 G/GL P42	7307CD/P4A GA	
40	90	23	2MM308WI CR SUL	7308 C TR SUL P3	B7308C.T.P4S.UL	308HCUL	7308C T1 G/GL P42	7308CD/P4A GA	
45	100	25	2MM309WI CR SUL	7309 C TR SUL P3	B7309C.T.P4S.UL	309HCUL	7309C T1 G/GL P42	7309CD/P4A GA	
50	110	27	2MM310WI CR SUL	7310 C TR SUL P3	B7310C.T.P4S.UL	310HCUL	7310C T1 G/GLP42	7310CD/P4A GA	
55	120	29	2MM311WI CR SUL	7311 C TR SUL P3	B7311C.T.P4S.UL	311HCUL	7311C T1 G/GL P42	7311CD/P4A GA	
60	130	31	2MM312WI CR SUL	7312 C TR SUL P3	B7312C.T.P4S.UL	312HCUL	7312C T1 G/GL P42	7312CD/P4A GA	
65	140	33	2MM313WI CR SUL	7313 C TR SUL P3	B7313C.T.P4S.UL	313HCUL	7313C T1 G/GL P42	7313CD/P4A GA	
70	150	35	2MM314WI CR SUL	7314 C TR SUL P3	B7314C.T.P4S.UL	314HCUL	7314C T1 G/GL P42	7314CD/P4A GA	
75	160	37	2MM315WI CR SUL	7315 C TR SUL P3	B7315C.T.P4S.UL	315HCUL	7315C T1 G/GL P42	7315CD/P4A GA	
80	170	39	2MM316WI CR SUL	7316 C TR SUL P3	B7316C.T.P4S.UL	316HCUL	7316C T1 G/GL P42	7316CD/P4A GA	
85	180	41	2MM317WI CR SUL	7317 C TR SUL P3	B7317C.T.P4S.UL	317HCUL	7317C T1 G/GL P42	7317CD/P4A GA	
90	190	43	2MM318WI CR SUL	7318 C TR SUL P3	B7318C.T.P4S.UL	318HCUL	7318C T1 G/GL P42	7318CD/P4A GA	
95	200	45	2MM319WI CR SUL	7319 C TR SUL P3	B7319C.T.P4S.UL	319HCUL	7319C T1 G/GL P42	7319CD/P4A GA	
100	215	47	2MM320WI CR SUL	7320 C TR SUL P3	B7320C.T.P4S.UL	320HCUL	7320C T1 G/GL P42	7320CD/P4A GA	
110	240	50	2MM322WI CR SUL	7321 C TR SUL P3	B7322C.T.P4S.UL	322HCUL	7322C T1 G/GL P42	7322CD/P4A GA	
120	260	55	2MM324WI CR SUL	7322 C TR SUL P3	B7324C.T.P4S.UL		7324C T1 G/GL P42	7324CD/P4A GA	
130	280	58	2MM326WI CR SUL	7324 C TR SUL P3	B7326C.T.P4S.UL		7326C T1 G/GLP42	7326CD/P4A GA	
140	300	62	2MM328WI CR SUL		B7328C.T.P4S.UL		7328C T1 G/GL P42	7328CD/P4A GA	
150	320	65	2MM330WI CR SUL		B7330C.T.P4S.UL		7330C T1 G/GL P42	7330CD/P4A GA	
10	35	11	2MMC300WI CR SUL	7300 C SN24 TR SUL P3	HCB7300C.T.P4S.UL	C300HCUL	5S-7300C T1 G/GL P42	7300CD/HCP4A GA	
12	37	12	2MMC301WI CR SUL	7301 C SN24 TR SUL P3	HCB7301C.T.P4S.UL	C301HCUL	5S-7301C T1 G/GL P42	7301CD/HCP4A GA	
15	42	13	2MMC302WI CR SUL	7302 C SN24 TR SUL P3	HCB7302C.T.P4S.UL	C302HCUL	5S-7302C T1 G/GL P42	7302CD/HCP4A GA	
17	47	14	2MMC303WI CR SUL	7303 C SN24 TR SUL P3	HCB7303C.T.P4S.UL	C303HCUL	5S-7303C T1 G/GL P42	7303CD/HCP4A GA	
20	52	15	2MMC304WI CR SUL	7304 C SN24 TR SUL P3	HCB7304C.T.P4S.UL	C304HCUL	5S-7304C T1 G/GL P42	7304CD/HCP4A GA	
25	62	17	2MMC305WI CR SUL	7305 C SN24 TR SUL P3	HCB7305C.T.P4S.UL	C305HCUL	5S-7305C T1 G/GL P42	7305CD/HCP4A GA	
30	72	19	2MMC306WI CR SUL	7306 C SN24 TR SUL P3	HCB7306C.T.P4S.UL	C306HCUL	5S-7306C T1 G/GL P42	7306CD/HCP4A GA	
35	80	21	2MMC307WI CR SUL	7307 C SN24 TR SUL P3	HCB7307C.T.P4S.UL	C307HCUL	5S-7307C T1 G/GL P42	7307CD/HCP4A GA	
40	90	23	2MMC308WI CR SUL	7308 C SN24 TR SUL P3	HCB7308C.T.P4S.UL	C308HCUL	5S-7308C T1 G/GL P42	7308CD/HCP4A GA	
45	100	25	2MMC309WI CR SUL	7309 C SN24 TR SUL P3	HCB7309C.T.P4S.UL	C309HCUL	5S-7309C T1 G/GL P42	7309CD/HCP4A GA	
50	110	27	2MMC310WI CR SUL	7310 C SN24 TR SUL P3	HCB7310C.T.P4S.UL	C310HCUL	5S-7310C T1 G/GL P42	7310CD/HCP4A GA	
55	120	29	2MMC311WI CR SUL	7311 C SN24 TR SUL P3	HCB7311C.T.P4S.UL	C311HCUL	5S-7311C T1 G/GL P42	7311CD/HCP4A GA	
60	130	31	2MMC312WI CR SUL	7312 C SN24 TR SUL P3	HCB7312C.T.P4S.UL	C312HCUL	5S-7312C T1 G/GL P42	7312CD/HCP4A GA	
65	140	33	2MMC313WI CR SUL	7313 C SN24 TR SUL P3	HCB7313C.T.P4S.UL	C313HCUL	5S-7313C T1 G/GL P42	7313CD/HCP4A GA	
70	150	35	2MMC314WI CR SUL	7314 C SN24 TR SUL P3	HCB7314C.T.P4S.UL	C314HCUL	5S-7314C T1 G/GL P42	7314CD/HCP4A GA	
75	160	37	2MMC315WI CR SUL	7315 C SN24 TR SUL P3	HCB7315C.T.P4S.UL	C315HCUL	5S-7315C T1 G/GL P42	7315CD/HCP4A GA	
80	170	39	2MMC316WI CR SUL	7316 C SN24 TR SUL P3	HCB7316C.T.P4S.UL	C316HCUL	5S-7316C T1 G/GL P42	7316CD/HCP4A GA	
85	180	41	2MMC317WI CR SUL	7317 C SN24 TR SUL P3	HCB7317C.T.P4S.UL	C317HCUL	5S-7317C T1 G/GL P42	7317CD/HCP4A GA	
90	190	43	2MMC318WI CR SUL	7318 C SN24 TR SUL P3	HCB7318C.T.P4S.UL	C318HCUL	5S-7318C T1 G/GL P42	7318CD/HCP4A GA	
95	200	45	2MMC319WI CR SUL	7319 C SN24 TR SUL P3	HCB7319C.T.P4S.UL	C319HCUL	5S-7319C T1 G/GL P42	7319CD/HCP4A GA	
100	215	47	2MMC320WI CR SUL	7320 C SN24 TR SUL P3	HCB7320C.T.P4S.UL	C320HCUL	5S-7320C T1 G/GL P42	7320CD/HCP4A GA	
110	240	50	2MMC322WI CR SUL	7321 C SN24 TR SUL P3	HCB7322C.T.P4S.UL	C322HCUL	5S-7322C T1 G/GL P42	7322CD/HCP4A GA	
120	260	55	2MMC324WI CR SUL	7322 C SN24 TR SUL P3	HCB7324C.T.P4S.UL		5S-7324C T1 G/GL P42	7324CD/HCP4A GA	
130	280	58	2MMC326WI CR SUL	7324 C SN24 TR SUL P3	HCB7326C.T.P4S.UL		5S-7326C T1 G/GL P42	7326CD/HCP4A GA	
140	300	62	2MMC328WI CR SUL				5S-7328C T1 G/GL P42	7328CD/HCP4A GA	
150	320	65	2MMC330WI CR SUL				5S-7330C T1 G/GL P42	7330CD/HCP4A GA	

Timken Machine Tool

Spindle Bearing Interchange List



ISO 19 Series with a 25 deg Contact Angle and Steel Balls

ISO 19 Series with a 25 deg Contact Angle and Ceramic Balls

Bore (mm)	O.D. (mm)	Width (mm)	Timken	NSK	FAG	Barden	NTN	SKF	SNFA
10	35	11	3MM300WI CR SUL	7300 A5 TR SUL P3	B7300E.T.P4S.UL	300HEUL	7300AD T1 G/GL P42	7300ACD/P4A GA	
12	37	12	3MM301WI CR SUL	7301 A5 TR SUL P3	B7301E.T.P4S.UL	301HEUL	7301AD T1 G/GL P42	7301ACD/P4A GA	
15	42	13	3MM302WI CR SUL	7302 A5 TR SUL P3	B7302E.T.P4S.UL	302HEUL	7302AD T1 G/GL P42	7302ACD/P4A GA	
17	47	14	3MM303WI CR SUL	7303 A5 TR SUL P3	B7303E.T.P4S.UL	303HEUL	7303AD T1 G/GL P42	7303ACD/P4A GA	
20	52	15	3MM304WI CR SUL	7304 A5 TR SUL P3	B7304E.T.P4S.UL	304HEUL	7304AD T1 G/GL P42	7304ACD/P4A GA	
25	62	17	3MM305WI CR SUL	7305 A5 TR SUL P3	B7305E.T.P4S.UL	305HEUL	7305AD T1 G/GL P42	7305ACD/P4A GA	
30	72	19	3MM306WI CR SUL	7306 A5 TR SUL P3	B7306E.T.P4S.UL	306HEUL	7306AD T1 G/GL P42	7306ACD/P4A GA	
35	80	21	3MM307WI CR SUL	7307 A5 TR SUL P3	B7307E.T.P4S.UL	307HEUL	7307AD T1 G/GL P42	7307ACD/P4A GA	
40	90	23	3MM308WI CR SUL	7308 A5 TR SUL P3	B7308E.T.P4S.UL	308HEUL	7308AD T1 G/GL P42	7308ACD/P4A GA	
45	100	25	3MM309WI CR SUL	7309 A5 TR SUL P3	B7309E.T.P4S.UL	309HEUL	7309AD T1 G/GL P42	7309ACD/P4A GA	
50	110	27	3MM310WI CR SUL	7310 A5 TR SUL P3	B7310E.T.P4S.UL	310HEUL	7310AD T1 G/GL P42	7310ACD/P4A GA	
55	120	29	3MM311WI CR SUL	7311 A5 TR SUL P3	B7311E.T.P4S.UL	311HEUL	7311AD T1 G/GL P42	7311ACD/P4A GA	
60	130	31	3MM312WI CR SUL	7312 A5 TR SUL P3	B7312E.T.P4S.UL	312HEUL	7312AD T1 G/GL P42	7312ACD/P4A GA	
65	140	33	3MM313WI CR SUL	7313 A5 TR SUL P3	B7313E.T.P4S.UL	313HEUL	7313AD T1 G/GL P42	7313ACD/P4A GA	
70	150	35	3MM314WI CR SUL	7314 A5 TR SUL P3	B7314E.T.P4S.UL	314HEUL	7314AD T1 G/GL P42	7314ACD/P4A GA	
75	160	37	3MM315WI CR SUL	7315 A5 TR SUL P3	B7315E.T.P4S.UL	315HEUL	7315AD T1 G/GL P42	7315ACD/P4A GA	
80	170	39	3MM316WI CR SUL	7316 A5 TR SUL P3	B7316E.T.P4S.UL	316HEUL	7316AD T1 G/GL P42	7316ACD/P4A GA	
85	180	41	3MM317WI CR SUL	7317 A5 TR SUL P3	B7317E.T.P4S.UL	317HEUL	7317AD T1 G/GL P42	7317ACD/P4A GA	
90	190	43	3MM318WI CR SUL	7318 A5 TR SUL P3	B7318E.T.P4S.UL	318HEUL	7318AD T1 G/GL P42	7318ACD/P4A GA	
95	200	45	3MM319WI CR SUL	7319 A5 TR SUL P3	B7319E.T.P4S.UL	319HEUL	7319AD T1 G/GL P42	7319ACD/P4A GA	
100	215	47	3MM320WI CR SUL	7320 A5 TR SUL P3	B7320E.T.P4S.UL	320HEUL	7320AD T1 G/GL P42	7320ACD/P4A GA	
110	240	50	3MM322WI CR SUL	7321 A5 TR SUL P3	B7322E.T.P4S.UL	322HEUL	7322AD T1 G/GL P42	7322ACD/P4A GA	
120	260	55	3MM324WI CR SUL	7322 A5 TR SUL P3	B7324E.T.P4S.UL		7324AD T1 G/GL P42	7324ACD/P4A GA	
130	280	58	3MM326WI CR SUL	7324 A5 TR SUL P3	B7326E.T.P4S.UL		7326AD T1 G/GL P42	7326ACD/P4A GA	
140	300	62	3MM328WI CR SUL				7328AD T1 G/GL P42	7328ACD/P4A GA	
150	320	65	3MM330WI CR SUL				7330AD T1 G/GL P42	7330ACD/P4A GA	
10	35	11	3MMC300WI CR SUL	7300 A5 SN24 TR SUL P3	HCB7300E.T.P4S.UL	C300HEUL	5S-7300AD T1 G/GL P42	7300ACD/HCP4A GA	
12	37	12	3MMC301WI CR SUL	7301 A5 SN24 TR SUL P3	HCB7301E.T.P4S.UL	C301HEUL	5S-7301AD T1 G/GL P42	7301ACD/HCP4A GA	
15	42	13	3MMC302WI CR SUL	7302 A5 SN24 TR SUL P3	HCB7302E.T.P4S.UL	C302HEUL	5S-7302AD T1 G/GL P42	7302ACD/HCP4A GA	
17	47	14	3MMC303WI CR SUL	7303 A5 SN24 TR SUL P3	HCB7303E.T.P4S.UL	C303HEUL	5S-7303AD T1 G/GL P42	7303ACD/HCP4A GA	
20	52	15	3MMC304WI CR SUL	7304 A5 SN24 TR SUL P3	HCB7304E.T.P4S.UL	C304HEUL	5S-7304AD T1 G/GL P42	7304ACD/HCP4A GA	
25	62	17	3MMC305WI CR SUL	7305 A5 SN24 TR SUL P3	HCB7305E.T.P4S.UL	C305HEUL	5S-7305AD T1 G/GL P42	7305ACD/HCP4A GA	
30	72	19	3MMC306WI CR SUL	7306 A5 SN24 TR SUL P3	HCB7306E.T.P4S.UL	C306HEUL	5S-7306AD T1 G/GL P42	7306ACD/HCP4A GA	
35	80	21	3MMC307WI CR SUL	7307 A5 SN24 TR SUL P3	HCB7307E.T.P4S.UL	C307HEUL	5S-7307AD T1 G/GL P42	7307ACD/HCP4A GA	
40	90	23	3MMC308WI CR SUL	7308 A5 SN24 TR SUL P3	HCB7308E.T.P4S.UL	C308HEUL	5S-7308AD T1 G/GL P42	7308ACD/HCP4A GA	
45	100	25	3MMC309WI CR SUL	7309 A5 SN24 TR SUL P3	HCB7309E.T.P4S.UL	C309HEUL	5S-7309AD T1 G/GL P42	7309ACD/HCP4A GA	
50	110	27	3MMC310WI CR SUL	7310 A5 SN24 TR SUL P3	HCB7310E.T.P4S.UL	C310HEUL	5S-7310AD T1 G/GL P42	7310ACD/HCP4A GA	
55	120	29	3MMC311WI CR SUL	7311 A5 SN24 TR SUL P3	HCB7311E.T.P4S.UL	C311HEUL	5S-7311AD T1 G/GL P42	7311ACD/HCP4A GA	
60	130	31	3MMC312WI CR SUL	7312 A5 SN24 TR SUL P3	HCB7312E.T.P4S.UL	C312HEUL	5S-7312AD T1 G/GL P42	7312ACD/HCP4A GA	
65	140	33	3MMC313WI CR SUL	7313 A5 SN24 TR SUL P3	HCB7313E.T.P4S.UL	C313HEUL	5S-7313AD T1 G/GL P42	7313ACD/HCP4A GA	
70	150	35	3MMC314WI CR SUL	7314 A5 SN24 TR SUL P3	HCB7314E.T.P4S.UL	C314HEUL	5S-7314AD T1 G/GL P42	7314ACD/HCP4A GA	
75	160	37	3MMC315WI CR SUL	7315 A5 SN24 TR SUL P3	HCB7315E.T.P4S.UL	C315HEUL	5S-7315AD T1 G/GL P42	7315ACD/HCP4A GA	
80	170	39	3MMC316WI CR SUL	7316 A5 SN24 TR SUL P3	HCB7316E.T.P4S.UL	C316HEUL	5S-7316AD T1 G/GL P42	7316ACD/HCP4A GA	
85	180	41	3MMC317WI CR SUL	7317 A5 SN24 TR SUL P3	HCB7317E.T.P4S.UL	C317HEUL	5S-7317AD T1 G/GL P42	7317ACD/HCP4A GA	
90	190	43	3MMC318WI CR SUL	7318 A5 SN24 TR SUL P3	HCB7318E.T.P4S.UL	C318HEUL	5S-7318AD T1 G/GL P42	7318ACD/HCP4A GA	
95	200	45	3MMC319WI CR SUL	7319 A5 SN24 TR SUL P3	HCB7319E.T.P4S.UL	C319HEUL	5S-7319AD T1 G/GL P42	7319ACD/HCP4A GA	
100	215	47	3MMC320WI CR SUL	7320 A5 SN24 TR SUL P3	HCB7320E.T.P4S.UL	C320HEUL	5S-7320AD T1 G/GL P42	7320ACD/HCP4A GA	
110	240	50	3MMC322WI CR SUL	7321 A5 SN24 TR SUL P3	HCB7322E.T.P4S.UL	C322HEUL	5S-7322AD T1 G/GL P42	7322ACD/HCP4A GA	
120	260	55	3MMC324WI CR SUL	7322 A5 SN24 TR SUL P3	HCB7324E.T.P4S.UL		5S-7324AD T1 G/GL P42	7324ACD/HCP4A GA	
130	280	58	3MMC326WI CR SUL	7324 A5 SN24 TR SUL P3	HCB7326E.T.P4S.UL		5S-7326AD T1 G/GL P42	7326ACD/HCP4A GA	
140	300	62	3MMC328WI CR SUL				5S-7328AD T1 G/GL P42	7328ACD/HCP4A GA	
150	320	65	3MMC330WI CR SUL				5S-7330AD T1 G/GL P42	7330ACD/HCP4A GA	

TIMKEN

Timken Machine Tool

Spindle Bearing Interchange List



Nomenclature

Timken	NSK	FAG	Barden	NTN	SKF	SNFA
<p>Ring Material E - WearEver Steel rings & ceramic balls (drop the C and the CR from the part number) <blank> 52100 through hardened & heat stabilized to 400°F Contact Angle 2 prefix - 15° 3 prefix - 25° 4 prefix - 18° Precision Class MM/MMV super high precision between ABEC-7 (ISO P4) and ABEC-9 (ISO P2) MMX ultra precision. ABEC-9 (ISO P2) Series 91 ISO 10 dimensional series (9100 extra light) 93 ISO 19 dimensional series (9300 ultra light) Bore Code <nn> 04 and up multiply by 5 to get the bore in millimeters (00=10mm, 01=12mm, 02=15mm, 03=17mm). Construction HX internal geometry is optimized for speed. Cage Material CR Phenolic cage Sealing VV high speed seals both sides, greased for life (drop the CR from the part number) Bearings Set Quantity S single bearing D duplex pair of bearings T triplex set of bearings Q quadruplex set of bearings Sets U universally ground Preload Level X Extra Light L Light M Medium H Heavy</p>	<p>Bearing Series 72 ISO 02 series 70 ISO 10 series 79 ISO 19 series Bore number <nn> 04 and up multiply by 5 to get the bore in millimeters (00=10mm, 01=12mm, 02=15mm, 03=17mm). Contact Angle C 15 degrees A5 25 degrees Ball material <blank> steel SN24 Ceramic Cage symbols TR phenolic cage Combination symbols DB duplex back-to-back DT duplex tandem DU duplex universal DBD, DTD 3 row combinations DBB, DBT 4 row combinations Preload symbols L light M medium H heavy Tolerance class P3 ABEC 7/9</p>	<p>Bearing Type HS High speed bearing, steel balls. HSS High speed bearing, steel balls, sealed. HC High speed bearing, ceramic balls. HCS High speed bearing, ceramic balls, sealed. XC X-life (Cronidur 30) ultra high speed bearing, ceramic balls. XCS X-life (Cronidur 30) ultra high speed bearing, ceramic balls, sealed. B Standard Design, Steel Balls HCB Hybrid, standard design, ceramic balls Series 70 ISO 10 dimensional series (medium series) 719 ISO 19 dimensional series (lightweight series) 72 ISO 02 dimensional series (heavy series) Bore Code <nn> 04 and up multiply by 5 to get the bore in millimeters (00=10mm, 01=12mm, 02=15mm, 03=17mm). Contact Angle C - 15° E - 25° Cage Material T Textile laminated Phenolic resin cage, outer ring piloted Accuracy P4S ABEC 7 nominal tolerances, ABEC 9 running accuracies Bearing Arrangement U universally ground, single bearing, any arrangement DU set of two universal bearings TU set of three universal bearings QU set of four universal bearings PU set of five universal bearings DB set of two bearings, back-to-back DF set of two bearings, face-to-face DT set of two bearings, tandem TBT set of three bearings, tandem-O-arrangement QBC set of four bearings, tandem-O-tandem arrangement Preload Level L Light M Medium H Heavy</p>	<p>Bearing Type <blank> standard design, steel balls C Hybrid, standard design, ceramic balls ZSB High speed bearing, steel balls. CZSB Hybrid high speed bearing, ceramic balls. XCZSB X-life (Cronidur 30) ultra high speed bearing, ceramic balls. Series 100 ISO 10 dimensional series (medium series) 1900 ISO 19 dimensional series (lightweight series) 200 ISO 02 dimensional series (heavy series) Bore Code <nn> 04 and up multiply by 5 to get the bore in millimeters (00=10mm, 01=12mm, 02=15mm, 03=17mm). Cage Material H Textile laminated Phenolic resin cage, outer ring piloted Contact Angle C - 15° E - 25° Seals RR seals at both sides and greased for life Bearing Arrangement U universally ground, single bearing, any arrangement DU set of two universal bearings TU set of three universal bearings QU set of four universal bearings PU set of five universal bearings DB set of two bearings, back-to-back DF set of two bearings, face-to-face DT set of two bearings, tandem TBT set of three bearings, tandem-O-arrangement QBC set of four bearings, tandem-O-tandem arrangement Preload Level L Light M Medium H Heavy</p>	<p>5S Ceramic balls Series 79 ISO 19 series 70 ISO 10 series 72 ISO 02 series 73 ISO 03 series Contact angles C 15 degrees AD 25 degrees <blank> 20 degrees Mounting configuration G Single universal ground GD2 pair of universal ground DB duplex back-to-back DF duplex face-to-face DT duplex tandem DBT, DFT, DTT triplex set DBTT, DFTT, DTBT, DTFT quad set Preload GL light GL normal GM medium GH heavy Precision/class P4 ISO Class 4 (ABEC 7) P42 ISO Class 2 & 4 (ABEC 7 & 9) P2 ISO Class 2 (ABEC 9)</p>	<p>Features S Sealed bearing (B internal design only) C Ceramic balls (B internal design only) Bearing Series 70 ISO dimensional series 10 719 ISO dimensional series 19 72 ISO dimensional series 02 73 ISO dimensional series 03 Bore Code 04 x 5 = 20mm bore diameter 30 x 5 = 150mm bore diameter Contact Angle C - 15° F - 18° (B internal design only) D - 25° (B internal design only) AC - 25° (E internal design only) Internal Design D Std deign B High speed design Cage Material <blank> Outer ring land riding, fabric reinforced Phenolic resin Material Symbol <blank> steel ball HC ceramic balls (E internal design only) Tolerance Class PA4, P7 dimensional accuracy to ISO class 4, running accuracy better than ISO class 4 PA9A, P9 accuracy to ABMA class ABEC 9 Number of Bearings in Set D 2 bearings in matched set T 3 bearings in matched set Q 4 bearings in matched set Bearing Arrangement in Matched Set B Back-to-back F Face-to-face T Tandem BT Back-to-back/tandem FT Face-to-face/tandem BC Back-to-back of pairs in tandem FC Face-to-face of pairs in tandem G For universal pairing Preload A Light preload B Medium preload C Heavy preload G... Special preload, e.g. G240</p>	<p>Form E Std internal geometry, WI style VE High speed internal geometry Bearing Series X ISO dimensional series 10 B ISO dimensional series 19 Bearing Bore <nnn> bearing bore (mm) Special Characteristic /NS ceramic balls Precision 7 ABEC 7 9 ABEC 9 Cage Material CE Outer ring land riding, fabric reinforced Phenolic resin Contact Angle 0 - 12° 1 - 15° 2 - 18° 3 - 25° Pairing set U Universal DU Duplex Universal TU Triplex Universal DD Back-to-back mounting FF Face-to-face mounting T Tandem TD Tandem/back-to-back TD Tandem/back-to-back/tandem 3TD Tandem/tandem/back-to-back Preload L Light preload M Medium preload F Heavy preload</p>

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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, gears, chain and related mechanical power transmission products and services.

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Ball Screw Support Bearing Interchange List



Metric series BSSB's duplex sets

Metric series BSSB's quad sets

Bore (mm)	O.D. (mm)	Width (mm)	Timken	NSK	FAG	SKF	SNFA
12	32	10	MM12BS32DUH	12TAC32DB	7602012-TVP	BSD1232DB	BS12327CDD**
15	35	11	MM15BS35DUH	15TAC35DB	7602015-TVP	BSD1535DB	BS15357CDD**
17	47	15	MM17BS47DUH	17TAC47DB		BSD1747DB	BS17477CDD**
20	47	15	MM20BS47DUH	20TAC47DB	7602020-TVP	BSD2047DB	BS20477CDD**
25	52	15	MM25BS52DUH	25TAC52DB	7602025-TVP	BSD2552DB	BS25527CDD**
25	62	15	MM25BS62DUH	25TAC62DB	7603025-TVP	BSD2562DB	BS25627CDD**
30	62	15	MM30BS62DUH	30TAC62DB	7602030-TVP	BSD3062DB	BS30627CDD**
30	72	15	MM30BS72DUH	30TAC72DB	7603030-TVP	BSD3072DB	BS30727CDD**
35	72	15	MM35BS72DUH	35TAC72DB	7602035-TVP	BSD3572DB	BS35727CDD**
40	72	15	MM40BS72DUH	40TAC72DB	BSB040072-T	BSD4072DB	BS40727CDD**
45	75	15	MM45BS75DUH	45TAC75DB	BSB045075-T	BSD4575DB	BS45757CDD**
40	90	15	MM40BS90DUH	40TAC90DB	BSB040090-T	BSD4090DB	BS40907CDD**
40	90	20	MM40BS90DUH-20				
40	90	23	MM40BS90DUH-23				
50	90	15	MM50BS90DUH	50TAC90DB	7602050-TVP	BSD5090DB	BS50907CDD**
55	90	15	MM55BS90DUH	55TAC90DB	BSB055090-T	BSD5590DB	BS55907CDD**
35	100	20	MM35BS100DUH	35TAC100DB		BSD35100DB	BS351007CDD**
40	100	20	MM40BS100DUH	40TAC100DB		BSD40100DB	BS401007CDD**
45	100	20	MM45BS100DUH	45TAC100DB	7603045-TVP	BSD45100DB	BS451007CDD**
50	100	20	MM50BS100DUH	50TAC100DB	BSB050100-T	BSD50100DB	BS501007CDD**
75	110	15	MM75BS110DUH	75TAC110DB	BSB075110-T	BSD75110DB	BS751107CDD**
55	120	20	MM55BS120DUH	55TAC120DB	7603055-TVP	BSD55120DB	BS551207CDD**
60	120	20	MM60BS120DUH	60TAC120DB	BSB060120-T	BSD60120DB	BS601207CDD**
100	150	20	MM100BS150DUH	100TAC150DB	BSB100150-T	BSD100150DB	BS1001507CDD**
17	47	15	MM17BS47QUH	17TAC47DBB		BSD1747QBC	BS17477CTDT**
20	4	15	MM20BS47QUH	20TAC47DBB	7602020-TVP	BSD2047QBC	BS20477CTDT**
25	52	15	MM25BS52QUH	25TAC52DBB	7602025-TVP	BSD2552QBC	BS25527CTDT**
25	62	15	MM25BS62QUH	25TAC62DBB	7603025-TVP	BSD2562QBC	BS25627CTDT**
30	62	15	MM30BS62QUH	30TAC62DBB	7602030-TVP	BSD3062QBC	BS30627CTDT**
30	72	15	MM30BS72QUH	30TAC72DBB	7603030-TVP	BSD3072QBC	BS30727CTDT**
35	72	15	MM35BS72QUH	35TAC72DBB	7602035-TVP	BSD3572QBC	BS35727CTDT**
40	72	15	MM40BS72QUH	40TAC72DBB	BSB040072-T	BSD4072QBC	BS40727CTDT**
45	75	15	MM45BS75QUH	45TAC75DBB	BSB045075-T	BSD4575QBC	BS45757CTDT**
40	90	15	MM40BS90QUH	40TAC90DBB	BSB040090-T	BSD4090QBC	BS40907CTDT**
50	90	15	MM50BS90QUH	50TAC90DBB	7602050-TVP	BSD5090QBC	BS50907CTDT**
55	90	15	MM55BS90QUH	55TAC90DBB	BSB055090-T	BSD5590QBC	BS55907CTDT**
35	100	20	MM35BS100QUH	35TAC100DBB		BSD35100QBC	BS351007CTDT**
40	100	20	MM40BS100QUH	40TAC100DBB		BSD40100QBC	BS401007CTDT**
45	100	20	MM45BS100QUH	45TAC100DBB	7603045-TVP	BSD45100QBC	BS451007CTDT**
50	100	20	MM50BS100QUH	50TAC100DBB	BSB050100-T	BSD50100QBC	BS501007CTDT**
75	110	15	MM75BS110QUH	75TAC110DBB	BSB075110-T	BSD75110QBC	BS751107CTDT**
55	120	20	MM55BS120QUH	55TAC120DBB	7603055-TVP	BSD55120QBC	BS551207CTDT**
60	120	20	MM60BS120QUH	60TAC120DBB	BSB060120-T	BSD60120QBC	BS601207CTDT**
100	150	20	MM100BS150QUH	100TAC150DBB	BSB100150-T	BSD100150QBC	BS1001507CTDT**

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Ball Screw Support Bearing Interchange List



	Timken	NSK	FAG	SKF	SNFA
Nomenclature	<u>Precision Level</u>	<u>Bore Size</u>	<u>Series Designator</u>	<u>Series Designator</u>	<u>Series Designator</u>
	MM – ABEC 7/9	Bore in mm	76	BSD ball screw support brg	BS ball screw support brg
	<u>Bore Size</u>	<u>Series Designator</u>	<u>Series</u>	<u>Bore Size</u>	<u>Bore Size</u>
	Size in mm	TAC	02	Bore in mm	Bore size in mm
	<u>Series Designator</u>	<u>OD Size</u>	<u>Bore</u>	<u>OD Size</u>	<u>OD Size</u>
	BS Ball screw	OD in mm	Bore in mm	OD in mm	OD size in mm
	<u>OD size</u>	<u>Matching</u>	<u>Cage Material</u>	<u>Matching</u>	<u>Precision Level</u>
	Size in mm	DB duplex back-to-back	TVP One piece nylon	DB duplex set	7 ABEC 7
	<u>Matching</u>	DBB quad set back-to-back	<u>Series Designator</u>	QBC quad set	<u>Cage Material</u>
	D duplex		BSB ballscrew support brg		C phenolic resin
Q quad		<u>Bore Size</u>		<u>Matching</u>	
<u>Preload</u>		Bore in mm		DD duplex set	
H heavy		<u>OD Size</u>		TDT quad set	
		OD in mm		<u>Preload</u>	
		(all above made as SINGLE bearings only)		** preload in DaN	
				(contact angle = 62 degrees)	