
1. Machine Information

- **Machine Name:** Columbus Wheel Spinner SP75-PC for cars
 - **Manufacturer:** Columbusmaskiner AB
 - **Tested Product Description:** Wheel Spinner
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2. EMC Test Report

- **Test Date:** 2024-12-18
 - **Test Time:** 12:57:05 - 12:57:23
 - **Test Leader:** Jari Palosaari
 - **Responsible for Machine's CE Marking:** Alexander Österström
 - **Test Type:** Electromagnetic Compatibility (EMC)
 - **Test Setup:** The measurement equipment (Combinova FD 10) was placed on a stand approximately 20 cm from the machine throughout the test.
 - **Measurement Range:** Frequency range 10 Hz - 400 kHz
 - **Standards Applied:**
 - EN 61000-6-2 (Immunity)
 - EN 61000-6-4 (Emission Requirements)
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3. **Test Results** The test was conducted with the specified measurement equipment and recorded electromagnetic field values at different frequencies. Here are the key measurements:

Date	Time	Serial No.	Measurement Mode	Speed	Status	Amplification	Peak Value (µT)	X (µT)	Y (µT)	Z (µT)	RMS (µT)	X RMS (µT)	Y RMS (µT)	Z RMS (µT)	Frequency (Hz)	
2024.12.18	12:57:05	1	B 10Hz - 400k Hz	1	Range change	(A)	0.9340	0.4322	0.5252	0.8546	0.4068	0.1282	0.2033	0.3282	0	
2024.12.18	12:57:07	2	B 10Hz - 400k Hz	1	OK	(A)	0.2747	0.1085	0.1954	0.2458	0.1589	0.0375	0.0860	0.1282	0	
2024.12.18	12:57:08	3	B 10Hz - 400k Hz	1	OK	(A)	0.3147	0.1309	0.2283	0.2705	0.1776	0.0493	0.0970	0.1404	0	
2024.12.18	12:57:09	4	B 10Hz -	1	OK	(A)	0.3460	0.1616	0.2572	0.2964	0.1896	0.0556	0.1051	0.1477	0	

			400k Hz													
2024.1 2.18	12:57 :10	5	B 10Hz - 400k Hz	1	OK	(A)	0.409 1	0.20 76	0.27 52	0.32 25	0.20 05	0.06 29	0.11 25	0.15 36	0	
2024.1 2.18	12:57 :11	6	B 10Hz - 400k Hz	1	OK	(A)	0.437 5	0.20 51	0.32 43	0.33 69	0.21 98	0.06 94	0.12 87	0.16 41	0	
2024.1 2.18	12:57 :12	7	B 10Hz - 400k Hz	1	OK	(A)	0.472 3	0.19 67	0.36 03	0.36 65	0.22 73	0.07 16	0.14 23	0.16 22	0	
2024.1 2.18	12:57 :13	8	B 10Hz - 400k Hz	1	OK	(A)	0.454 7	0.19 69	0.33 95	0.34 81	0.21 13	0.06 77	0.13 92	0.14 38	0	
2024.1 2.18	12:57 :14	9	B 10Hz - 400k Hz	1	OK	(A)	0.406 6	0.20 02	0.31 72	0.32 58	0.20 53	0.06 76	0.13 90	0.13 51	0	
2024.1 2.18	12:57 :15	10	B 10Hz - 400k Hz	1	OK	(A)	1.124 6	0.59 85	0.67 04	0.89 66	0.28 21	0.11 48	0.16 87	0.19 48	15	
2024.1 2.18	12:57 :16	11	B 10Hz - 400k Hz	1	OK	(A)	1.018 4	0.52 87	0.71 28	0.83 11	0.49 85	0.21 70	0.27 16	0.35 72	0	
2024.1 2.18	12:57 :17	12	B 10Hz - 400k Hz	1	OK	(A)	0.481 9	0.24 96	0.29 82	0.39 84	0.29 04	0.13 03	0.15 05	0.21 14	0	
2024.1 2.18	12:57 :18	13	B 10Hz - 400k Hz	1	OK	(A)	1.061 8	0.40 39	0.62 79	0.90 11	0.41 58	0.17 78	0.21 81	0.30 62	40	
2024.1 2.18	12:57 :19	14	B 10Hz - 400k Hz	1	OK	(A)	1.152 8	0.39 37	0.63 28	1.06 85	0.53 79	0.16 83	0.26 50	0.43 68	0	
2024.1 2.18	12:57 :20	15	B 10Hz - 400k Hz	1	OK	(A)	0.805 6	0.31 11	0.45 66	0.70 52	0.51 50	0.15 54	0.25 67	0.41 85	0	

2024.1 2.18	12:57 :21	16	B 10Hz - 400k Hz	1	OK	(A)	0.611 8	0.26 21	0.40 35	0.55 80	0.37 66	0.11 45	0.19 45	0.30 15	0	
2024.1 2.18	12:57 :22	17	B 10Hz - 400k Hz	1	OK	(A)	0.513 6	0.22 91	0.36 29	0.41 83	0.27 16	0.08 57	0.15 46	0.20 61	0	
2024.1 2.18	12:57 :23	18	B 10Hz - 400k Hz	1	OK	(A)	0.440 8	0.20 61	0.32 86	0.36 71	0.22 10	0.07 10	0.13 91	0.15 64	0	

Measurement Uncertainty: The measurement uncertainty for the recorded electromagnetic fields is estimated at $\pm 5\%$, based on the test equipment specifications and standard measurement uncertainty for this type of test.

4. Conclusion

- **Test Results:** The test was conducted to measure electromagnetic fields between 10 Hz and 400 kHz. All results have been documented according to the standard EN 61000-6-2 (Immunity) and EN 61000-6-4 (Emission Requirements).
- **Approval:** The machine meets the electromagnetic compatibility requirements according to applicable standards and is therefore approved.

In summary, the results show that the Columbus Wheel Spinner SP75-PV does not exceed the allowed limits for electromagnetic fields according to the tests, meaning the product is approved for use in environments with relevant EMC requirements.

5. Approval

- **Test Leader (Name, Title):** Jari Palosaari, Test Leader
Date: 2024-12-20
 - **Responsible for Machine's CE Marking:** Alexander Österström, Technical Manager
Date: 2024-12-20
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