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Consolidated Financial Results for the Six Months Ended September 30, 2023 [Japanese GAAP]

November 9, 2023

Company name: Harmonic Drive Systems Inc.
Stock exchange listing: Tokyo Stock Exchange
Code number: 6324
URL: https://www.hds.co.jp/english/
Representative: Akira Nagai, President, Representative Director
Contact: Akira Maruyama, Representative Director
Phone: +81-3-5471-7810
Scheduled date of filing quarterly securities report: November 13, 2023
Scheduled date of commencing dividend payments: December 4, 2023
Availability of supplementary explanatory materials on quarterly financial results: Available
Schedule of quarterly financial results briefing session: Scheduled (for analysts)

(Amounts less than one million yen are rounded down.)

1. Consolidated Financial Results for the Six Months Ended September 30, 2023 (April 1, 2023 – September 30, 2023)

(1) Consolidated Operating Results (% indicates changes from the previous corresponding period.)

	Net sales		Operating profit		Ordinary profit		Profit attributable to owners of parent	
Six months ended	Million yen	%	Million yen	%	Million yen	%	Million yen	%
September 30, 2023	28,765	(14.0)	872	(81.2)	1,163	(76.4)	313	(89.3)
September 30, 2022	33,451	27.0	4,640	31.6	4,924	38.1	2,938	32.5

(Note) Comprehensive income: Six months ended September 30, 2023: ¥4,240 million [(32.1)%]
Six months ended September 30, 2022: ¥6,242 million [315.4 %]

	Basic earnings per share	Diluted earnings per share
Six months ended	Yen	Yen
September 30, 2023	3.29	–
September 30, 2022	30.74	–

(2) Consolidated Financial Position

	Total assets	Net assets	Equity ratio
	Million yen	Million yen	%
As of September 30, 2023	151,411	106,651	70.4
As of March 31, 2023	154,336	103,955	67.4

(Reference) Equity: As of September 30, 2023: ¥106,651 million
As of March 31, 2023: ¥103,955 million

2. Dividends

	Annual dividends				
	1st quarter-end	2nd quarter-end	3rd quarter-end	Year-end	Total
	Yen	Yen	Yen	Yen	Yen
Fiscal year ended March 31, 2023	–	11.00	–	17.00	28.00
Fiscal year ending March 31, 2024	–	10.00			
Fiscal year ending March 31, 2024 (Forecast)			–	10.00	20.00

(Note) Revision to the forecast for dividends announced most recently: Yes

3. Consolidated Financial Results Forecast for the Fiscal Year Ending March 31, 2024 (April 1, 2023 – March 31, 2024)

(% indicates changes from the previous corresponding period.)

	Net sales		Operating profit		Ordinary profit		Profit attributable to owners of parent		Basic earnings per share
	Million yen	%	Million yen	%	Million yen	%	Million yen	%	Yen
Full year	55,000	(23.1)	(400)	–	(200)	–	(800)	–	(8.41)

(Note) Revision to the financial results forecast announced most recently: Yes

*** Notes:**

(1) Changes in significant subsidiaries during the period under review: None

(2) Accounting methods adopted particularly for the preparation of quarterly consolidated financial statements: None

(3) Changes in accounting policies, changes in accounting estimates and retrospective restatement

1) Changes in accounting policies due to the revision of accounting standards: None
2) Changes in accounting policies other than 1) above: None
3) Changes in accounting estimates: None
4) Retrospective restatement: None

(4) Total number of issued and outstanding shares (common shares)

1) Total number of issued and outstanding shares at the end of the period (including treasury shares):

September 30, 2023:	96,315,400 shares
March 31, 2023:	96,315,400 shares

2) Total number of treasury shares at the end of the period:

September 30, 2023:	1,234,249 shares
March 31, 2023:	1,251,002 shares

3) Average number of shares outstanding during the period:

Six months ended September 30, 2023:	95,069,982 shares
Six months ended September 30, 2022:	95,610,442 shares

* These quarterly consolidated financial results are outside the scope of quarterly review by certified public accountants or an audit firm.

* Explanation of the proper use of financial results forecasts and other notes

The financial results forecasts and other forward-looking statements contained herein are based on information currently available to the Company and certain assumptions deemed reasonable by the Company. These statements do not represent a guarantee from the Company that it will achieve such results. The actual financial results may differ significantly due to various factors. Refer to "1. Qualitative Information on Quarterly Financial Results (3) Explanation of Consolidated Financial Results Forecast and Other Forward-looking Information" on page 4 of the Attachments for conditions on which the financial results forecasts are premised and notes on the use of financial results forecasts.

Table of Contents - Attachments

1. Qualitative Information on Quarterly Financial Results

(1) Explanation of Operating Results

During the six months ended September 30 (April 1, 2023 to September 30, 2023), future of the world economy remained uncertain, affected by factors such as the prolonged situation in Ukraine, worldwide inflation, and financial insecurity due to policy interest rate increases in countries around the globe. The business environment surrounding the Harmonic Drive Systems Group (hereinafter “the Group”) became tough owing to softness in capital investment trends in Chinese electronics and semiconductors, and the inventory adjustments of our products by customers and agencies of the Group.

Regarding net sales trends by application, net sales increased year on year for automotive applications resulting from a recovery of car production in line with an abatement of the worldwide semiconductor shortage. Meanwhile, net sales decreased for industrial robots, semiconductor manufacturing equipment, flat panel display manufacturing equipment, and other general industrial machinery applications.

As a result, net sales for the six months ended September 30, 2023 decreased by 14.0% year on year to ¥28,765 million.

In terms of profit and loss, depreciation cost increased as a result of investment made to enhance production capacity in Japan during the previous fiscal year. In addition, the lower operating rates of production plants in Japan during the fiscal year under review also affected the results, and operating profit decreased to ¥872 million, down 81.2% year on year. Profit attributable to owners of parent also decreased to ¥313 million, down 89.3% year on year, due to a decrease in operating profit and a reversal of deferred tax assets.

In terms of net sales by product group, speed reducers totaled ¥20,192 million, down 25.8% year on year, and mechatronics products reached ¥8,572 million, up 37.3% year on year. They accounted for 70.2% and 29.8% of the total net sales, respectively.

Financial results by segment are as follows.

(Japan)

Sales increased for automotive application resulting from a recovery of car production in line with a relaxation of the supply-demand balance for semiconductors. Meanwhile, demand declined for industrial robots, semiconductor manufacturing equipment, flat panel display manufacturing equipment, and other general industrial machinery applications owing to softness in capital investment trends in Chinese electronics and semiconductors, and the inventory adjustments of our products by customers and agencies of the Group. As a result, net sales decreased by 34.5% year on year to ¥14,056 million. Segment profit (ordinary profit) decreased by 29.1% year on year to ¥4,322 million resulting from the inclusion of dividend income from subsidiaries of ¥2,486 million recorded in non-operating income, despite the effects of decreased sales and the lower operating rates of production plants.

(North America)

Exchange rates of the yen remained weak, and demand increased for advanced medical applications (surgical robot-related) and amusement application. As a result, net sales increased by 46.0% year on year to ¥6,661 million. Segment profit (ordinary profit) increased by 88.4% year on year to ¥867 million due to the effect of increase in sales.

(Europe)

Exchange rates of the yen remained weak, and demand increased for cutting-edge semiconductor manufacturing equipment, despite a decrease in demand for industrial robots. As a result, net sales increased by 8.5% year on year to ¥8,047 million. Segment profit (ordinary profit) decreased by 75.1% year on year to ¥100 million due to the amortization cost of ¥928 million on intangible assets posted at the time of acquisition of shares in Harmonic Drive SE.

(2) Explanation of Financial Position

(Assets)

Total assets at the end of the second quarter of the fiscal year under review decreased by ¥2,924 million, down 1.9% from the end of the previous fiscal year to ¥151,411 million. This was primarily because of a 42.7% or ¥3,160 million decrease in notes receivable - trade from the end of the previous fiscal year resulting from a decrease in net sales, as well as a 16.0% or ¥1,767 million decrease in investment securities from the end of the previous fiscal year due to a decrease in market capitalization of securities held by the Company.

(Liabilities)

Liabilities decreased by ¥5,621 million, down 11.2% from the end of the previous fiscal year to ¥44,759 million. This was primarily because of a 76.2% or ¥1,990 million decrease in short-term borrowings and a 7.0% or ¥1,248 million decrease in long-term borrowings resulting from repayments of borrowings, as well as a 74.9% or ¥784 million decrease in income taxes payable from the end of the previous fiscal year.

(Net Assets)

Net assets increased by ¥2,696 million, up 2.6% from the end of the previous fiscal year to ¥106,651 million. This was primarily because of a 62.6% or ¥5,095 million increase in foreign currency translation adjustment from the end of the previous fiscal year due to the effect of exchange rate fluctuations, despite a 2.0% or ¥1,303 million decrease in retained earnings from the end of the previous fiscal year resulting from the payment of dividends of surplus and a 21.0% or ¥1,226 million decrease in valuation difference on available-for-sale securities from the end of the previous fiscal year resulting from market valuation of investment securities.

As a result, equity ratio rose from 67.4% at the end of the previous fiscal year to 70.4%.

(Status of Cash Flows)

Cash and cash equivalents as of September 30, 2023 totaled ¥18,985 million, down ¥936 million from the end of the previous fiscal year.

The status of cash flows by category during the six months ended September 30, 2023 is as follows.

(Cash Flows from Operating Activities)

Operating activities in the six months ended September 30, 2023 provided net cash of ¥8,246 million, compared with net cash provided of ¥2,298 million in the same period of the previous fiscal year.

This was primarily because the Company recorded ¥2,164 million used for income taxes paid, which was partially offset by ¥4,565 million provided from a decrease in trade receivables and depreciation of ¥4,373 million.

(Cash Flows from Investing Activities)

Investing activities in the six months ended September 30, 2023 used net cash of ¥4,379 million, compared with net cash used of ¥3,275 million in the same period of the previous fiscal year.

This was primarily because of ¥2,810 million used for purchase of property, plant and equipment, and ¥1,291 million used for payments into time deposits.

(Cash Flows from Financing Activities)

Financing activities in the six months ended September 30, 2023 used net cash of ¥5,164 million, compared with net cash used of ¥2,280 million in the same period of the previous fiscal year.

This was primarily because of ¥1,210 million provided from the proceeds from short-term borrowings, which was partially offset by ¥3,200 million used for repayments of short-term borrowings, ¥1,614 million used in dividends paid, and ¥1,308 million used for repayments of long-term borrowings.

(3) Explanation of Consolidated Financial Results Forecast and Other Forward-looking Information

The Group had disclosed a forecast only for the first six months of the fiscal year ending March 31, 2024 as we see difficulties in precisely predicting when the full-scale pick-up in orders received will occur. However, the Group disclosed the forecast for the full fiscal year, considering the financial results of the six months ended September 30, 2023, as well as the current business environment and forecast for demand and current trend in orders received. For more information, refer to “Notice Regarding Differences Between the Financial Results Forecast and the Actual Results for the Six Months Ended September 30, 2023, Revision to the Financial Results Forecast for the Fiscal Year Ending March 31, 2024, and Revision to the Year-End Dividend Forecast” disclosed on November 9, 2023.

2. Quarterly Consolidated Financial Statements and Principal Notes

(1) Quarterly Consolidated Balance Sheets

(Thousands of yen)

	As of March 31, 2023	As of September 30, 2023
Assets		
Current assets		
Cash and deposits	20,783,570	21,255,317
Notes receivable - trade	7,408,386	4,248,383
Accounts receivable - trade	10,165,121	9,268,727
Securities	28,840	29,113
Merchandise and finished goods	2,014,249	2,950,506
Work in process	3,658,753	3,468,892
Raw materials and supplies	6,828,695	6,797,206
Other	1,307,220	1,522,618
Allowance for doubtful accounts	(19,356)	(23,523)
Total current assets	52,175,480	49,517,242
Non-current assets		
Property, plant and equipment		
Buildings and structures, net	19,423,071	19,502,709
Machinery, equipment and vehicles, net	17,337,080	16,985,518
Tools, furniture and fixtures, net	1,843,670	1,768,934
Other, net	10,323,026	10,129,633
Total property, plant and equipment	48,926,847	48,386,795
Intangible assets		
Goodwill	15,258,139	15,953,105
Software	191,453	195,569
Customer related assets	19,489,904	20,377,615
Technical assets	5,205,468	5,442,562
Other	187,939	230,858
Total intangible assets	40,332,904	42,199,711
Investments and other assets		
Investment securities	11,044,878	9,277,348
Shares of subsidiaries and associates	89,956	65,166
Long-term loans receivable from subsidiaries and associates	—	200,000
Retirement benefit asset	1,191,060	1,221,862
Deferred tax assets	439,351	413,086
Other	141,366	135,644
Allowance for doubtful accounts	(5,600)	(5,600)
Total investments and other assets	12,901,013	11,307,508
Total non-current assets	102,160,765	101,894,016
Total assets	154,336,246	151,411,258

(Thousands of yen)

	As of March 31, 2023	As of September 30, 2023
Liabilities		
Current liabilities		
Notes and accounts payable - trade	3,596,434	3,130,011
Short-term borrowings	2,610,183	620,000
Current portion of long-term borrowings	2,569,064	2,560,666
Lease liabilities	583,255	630,913
Income taxes payable	1,046,412	262,297
Provision for bonuses	1,471,732	814,655
Provision for bonuses for directors (and other officers)	351,669	52,093
Provision for loss on compensation for after-care of products	64,009	113,029
Other	4,174,756	3,724,417
Total current liabilities	16,467,518	11,908,084
Non-current liabilities		
Long-term borrowings	17,766,840	16,518,654
Lease liabilities	3,836,603	3,833,382
Deferred tax liabilities	10,003,116	10,167,934
Provision for retirement benefits for directors (and other officers)	12,000	19,200
Other provisions	80,260	91,892
Retirement benefit liability	750,593	817,939
Other	1,463,654	1,402,190
Total non-current liabilities	33,913,069	32,851,195
Total liabilities	50,380,587	44,759,280
Net assets		
Shareholders' equity		
Share capital	7,100,036	7,100,036
Capital surplus	22,773,595	22,778,711
Retained earnings	64,852,655	63,549,583
Treasury shares	(4,978,535)	(4,911,865)
Total shareholders' equity	89,747,751	88,516,466
Accumulated other comprehensive income		
Valuation difference on available-for-sale securities	5,845,310	4,619,161
Foreign currency translation adjustment	8,146,088	13,242,014
Remeasurements of defined benefit plans	216,507	274,335
Total accumulated other comprehensive income	14,207,906	18,135,512
Total net assets	103,955,658	106,651,978
Total liabilities and net assets	154,336,246	151,411,258

(2) Quarterly Consolidated Statements of Income and Comprehensive Income

Quarterly Consolidated Statement of Income

(Thousands of yen)

	For the six months ended September 30, 2022	For the six months ended September 30, 2023
Net sales	33,451,614	28,765,131
Cost of sales	21,335,331	20,204,921
Gross profit	12,116,283	8,560,210
Selling, general and administrative expenses	7,475,517	7,687,544
Operating profit	4,640,765	872,666
Non-operating income		
Interest income	2,451	35,774
Dividend income	129,029	132,952
Share of profit of entities accounted for using equity method	4,784	—
Foreign exchange gains	361,061	163,515
Other	101,887	153,610
Total non-operating income	599,214	485,853
Non-operating expenses		
Interest expenses	75,668	85,334
Sales discounts	7,689	—
Share of loss of entities accounted for using equity method	—	24,789
Commission for purchase of treasury shares	116,897	—
Rental expenses	72,103	58,075
Other	42,626	26,570
Total non-operating expenses	314,984	194,769
Ordinary profit	4,924,995	1,163,749
Extraordinary income		
Gain on sale of non-current assets	767	6,660
Subsidy income	2,000	—
Total extraordinary income	2,767	6,660
Extraordinary losses		
Loss on sale of non-current assets	—	422
Loss on retirement of non-current assets	38,495	4,463
Loss on tax purpose reduction entry of non-current assets	2,000	—
Special extra for retirement payments	501,537	—
Total extraordinary losses	542,033	4,886
Profit before income taxes	4,385,729	1,165,523
Income taxes - current	1,579,395	764,601
Income taxes - deferred	(132,644)	87,900
Total income taxes	1,446,750	852,501
Profit	2,938,978	313,022
Profit attributable to non-controlling interests	—	—
Profit attributable to owners of parent	2,938,978	313,022

Quarterly Consolidated Statement of Comprehensive Income

(Thousands of yen)

	For the six months ended September 30, 2022	For the six months ended September 30, 2023
Profit	2,938,978	313,022
Other comprehensive income		
Valuation difference on available-for-sale securities	(763,620)	(1,226,149)
Foreign currency translation adjustment	4,055,149	5,095,926
Remeasurements of defined benefit plans, net of tax	12,328	57,828
Total other comprehensive income	3,303,858	3,927,605
Comprehensive income	6,242,836	4,240,628
Comprehensive income attributable to		
Comprehensive income attributable to owners of parent	6,242,836	4,240,628
Comprehensive income attributable to non-controlling interests	—	—

(3) Quarterly Consolidated Statements of Cash Flows

(Thousands of yen)

	For the six months ended September 30, 2022	For the six months ended September 30, 2023
Cash flows from operating activities		
Profit before income taxes	4,385,729	1,165,523
Depreciation	3,902,032	4,373,289
Amortization of goodwill	518,793	573,616
Increase (decrease) in allowance for doubtful accounts	(2,238)	1,847
Increase (decrease) in retirement benefit liability	(154,943)	(35,608)
Increase (decrease) in provision for retirement benefits for directors (and other officers)	(484,413)	7,200
Increase (decrease) in provision for operating officers' retirement benefits	(59,340)	11,632
Increase (decrease) in provision for bonuses for directors (and other officers)	(119,394)	(305,313)
Increase (decrease) in provision for loss on compensation for after-care of products	3,462	44,202
Interest income	(2,451)	(35,774)
Dividend income	(129,029)	(132,952)
Interest expenses	75,668	85,334
Share of loss (profit) of entities accounted for using equity method	(4,784)	24,789
Subsidy income	(2,000)	—
Loss (gain) on sale of non-current assets	(767)	(6,237)
Loss on retirement of non-current assets	38,495	4,463
Loss on tax purpose reduction entry of non-current assets	2,000	—
Decrease (increase) in trade receivables	(1,515,734)	4,565,064
Decrease (increase) in inventories	(2,529,716)	137,438
Increase (decrease) in trade payables	347,298	(654,932)
Other, net	786,792	319,183
Subtotal	5,055,459	10,142,766
Interest and dividends received	131,449	168,429
Subsidies received	2,000	—
Interest paid	(88,273)	(88,577)
Income taxes paid	(2,946,687)	(2,164,676)
Income taxes refund	144,844	188,245
Net cash provided by (used in) operating activities	2,298,791	8,246,187
Cash flows from investing activities		
Purchase of property, plant and equipment	(2,862,183)	(2,810,567)
Proceeds from sale of property, plant and equipment	1,522	14,700
Purchase of intangible assets	(55,024)	(96,198)
Payments into time deposits	(1,312,519)	(1,291,819)
Proceeds from withdrawal of time deposits	956,452	—
Payments of leasehold and guarantee deposits	(4,984)	(3,280)
Proceeds from refund of leasehold and guarantee deposits	981	7,180
Loan advances to subsidiaries and associates	—	(200,000)
Other, net	240	240
Net cash provided by (used in) investing activities	(3,275,515)	(4,379,743)

(Thousands of yen)

	For the six months ended September 30, 2022	For the six months ended September 30, 2023
Cash flows from financing activities		
Proceeds from short-term borrowings	5,700,000	1,210,094
Repayments of short-term borrowings	(700,000)	(3,200,189)
Proceeds from long-term borrowings	―	50,000
Repayments of long-term borrowings	(972,380)	(1,308,782)
Repayments of lease liabilities	(255,750)	(301,620)
Purchase of treasury shares	(5,000,000)	―
Dividends paid	(1,052,522)	(1,614,289)
Net cash provided by (used in) financing activities	(2,280,653)	(5,164,786)
Effect of exchange rate change on cash and cash equivalents	490,066	362,294
Net increase (decrease) in cash and cash equivalents	(2,767,310)	(936,047)
Cash and cash equivalents at beginning of period	18,767,531	19,921,977
Cash and cash equivalents at end of period	16,000,221	18,985,929

(4) Notes to Quarterly Consolidated Financial Statements

(Notes on going concern assumption)

Not applicable.

(Notes in case of significant changes in shareholders' equity)

Not applicable.

(Changes in accounting policies)

Not applicable.

(Segment information, etc.)

[Segment information]

I For the six months ended September 30, 2022 (from April 1, 2022 to September 30, 2022)

1. Information on net sales and profit, and information on disaggregation of revenue, by reportable segment

(Thousands of yen)

	Reportable segment				Adjustment	Consolidated
	Japan	North America	Europe	Total		
Net sales Revenue from contracts with customers	24,575,394	4,570,812	7,789,302	36,935,510	(3,483,895)	33,451,614
Net sales to third parties	21,468,829	4,563,487	7,419,298	33,451,614	–	33,451,614
Inter-segment net sales or transfers	3,106,565	7,325	370,004	3,483,895	(3,483,895)	–
Total	24,575,394	4,570,812	7,789,302	36,935,510	(3,483,895)	33,451,614
Segment profit	6,098,200	460,554	404,239	6,962,994	(2,037,999)	4,924,995

(Notes)
1. The segment profit adjustment of ¥(2,037,999) thousand includes the eliminated inter-segment transaction profit of ¥(813,240) thousand and the general administrative expenses that are not allocated to any reportable segment, totaling ¥(1,224,759) thousand. The general administrative expenses that are not allocated to any reportable segment consist mainly of the basic research and development expenses and certain administrative expenses related to the General Affairs and Accounting Department.
2. The “Japan” segment includes the net sales and expenses related to the European and Asian markets, in addition to the Japanese market.
3. The “North America” segment includes net sales of ¥3,802,855 thousand originating from the United States of America, which represents 10% or more of net sales recorded on the consolidated statements of income.
4. Segment profit is adjusted to ordinary profit in the quarterly consolidated statements of income.

II For the six months ended September 30, 2023 (from April 1, 2023 to September 30, 2023)

1. Information on net sales and profit, and information on disaggregation of revenue, by reportable segment

(Thousands of yen)

	Reportable segment				Adjustment	Consolidated
	Japan	North America	Europe	Total		
Net sales Revenue from contracts with customers	16,531,612	6,669,477	8,207,926	31,409,016	(2,643,884)	28,765,131
Net sales to third parties	14,056,207	6,661,397	8,047,526	28,765,131	–	28,765,131
Inter-segment net sales or transfers	2,475,404	8,080	160,399	2,643,884	(2,643,884)	–
Total	16,531,612	6,669,477	8,207,926	31,409,016	(2,643,884)	28,765,131
Segment profit	4,322,075	867,839	100,792	5,290,707	(4,126,957)	1,163,749

(Notes)
1. The segment profit adjustment of ¥(4,126,957) thousand includes the eliminated inter-segment transaction profit of ¥(2,978,590) thousand and the general administrative expenses that are not allocated to any reportable segment, totaling ¥(1,148,366) thousand. The general administrative expenses that are not allocated to any reportable segment consist mainly of the basic research and development expenses, certain administrative expenses related to the General Affairs and Accounting Department, and the amortization cost of ¥573,616 thousand on goodwill involved in acquisition of shares in Harmonic Drive SE.
2. The “Japan” segment includes the net sales and expenses related to the European and Asian markets, in addition to the Japanese market.
3. The “North America” segment includes net sales of ¥5,953,049 thousand originating from the United States of America, which represents 10% or more of net sales recorded on the consolidated statements of income.

4. The “Europe” segment includes net sales of ¥3,096,458 thousand originating from Germany, which represents 10% or more of net sales recorded on the consolidated statements of income.
5. Segment profit is adjusted to ordinary profit in the quarterly consolidated statements of income.

3. Other Matters

(1) Status of Production, Orders Received and Sales

a. Production

Production results by segment for the six months ended September 30, 2023 (April 1, 2023 to September 30, 2023) are as follows:

Segment name		Production output (thousands of yen)	YoY change (%)
Japan	Speed reducers	14,408,735	(34.2)
	Mechatronic products	3,616,422	7.5
North America	Speed reducers	2,293,363	37.7
	Mechatronic products	3,155,754	78.1
Europe	Speed reducers	4,616,629	(15.1)
	Mechatronic products	2,295,333	66.8
Total		30,386,239	(14.4)

(Notes)
1. Inter-segment transactions are offset and eliminated.
2. The above amounts are sales prices and exclude consumption taxes.
3. The Group's reportable segments are classified on a location basis (Japan, North America, and Europe).
4. Although the Group is solely engaged in handling the same types and series of precision speed reducers and its business operations fall within a single industry segment based on the similarities in the types, natures, manufacturing methods and markets of their products, the above table presents figures by product for each segment.
5. The production results of Harmonic Winbel Inc., a subsidiary engaged in the development, manufacturing, and sales of magnetic application equipment, are classified, counted, and presented as mechatronic products.

b. Orders received

The results of orders received by segment for the six months ended September 30, 2023 (April 1, 2023 to September 30, 2023) are as follows:

Segment name		Orders received (thousands of yen)	YoY change (%)	Order backlog (thousands of yen)	YoY change (%)
Japan	Speed reducers	8,742,560	(33.0)	4,189,633	(82.2)
	Mechatronic products	901,331	(54.2)	1,172,190	(50.8)
North America	Speed reducers	2,273,569	1.9	4,735,292	(2.8)
	Mechatronic products	1,955,989	(53.5)	5,806,998	(29.4)
Europe	Speed reducers	5,349,081	(28.3)	7,457,106	3.0
	Mechatronic products	2,448,445	5.7	2,996,198	9.5
Total		21,670,977	(30.6)	26,357,419	(46.2)

(Notes)
1. Inter-segment transactions are offset and eliminated.
2. The above amounts exclude consumption taxes.
3. The Group's reportable segments are classified on a location basis (Japan, North America, and Europe).
4. Although the Group is solely engaged in handling the same types and series of precision speed reducers and its business operations fall within a single industry segment based on the similarities in the types, natures, manufacturing methods and markets of their products, the above table presents figures by product for each segment.
5. The results of orders received of Harmonic Winbel Inc., a subsidiary engaged in the development, manufacturing, and sales of magnetic application equipment, are classified, counted, and presented as mechatronic products.
6. The order backlog excludes ¥433,615 thousand of order cancellations. The cancellations took place during the six months ended September 30, 2023.

c. Sales

Sales results by segment for the six months ended September 30, 2023 (April 1, 2023 to September 30, 2023) are as follows:

Segment name		Sales volume (thousands of yen)	YoY change (%)
Japan	Speed reducers	12,096,976	(38.1)
	Mechatronic products	1,959,231	2.3
North America	Speed reducers	2,762,791	30.1
	Mechatronic products	3,898,605	59.8
Europe	Speed reducers	5,332,835	(3.6)
	Mechatronic products	2,714,690	43.7
Total		28,765,131	(14.0)

(Notes) 1. Inter-segment transactions are offset and eliminated.

2. Sales by primary customer and the ratio of the sales to the total sales are as follows:

Customer	Six months ended September 30, 2022		Six months ended September 30, 2023	
	Sales (thousands of yen)	Ratio (%)	Sales (thousands of yen)	Ratio (%)
Haneda & Co., Ltd.	3,996,228	11.9	–	–

The sales to Haneda & Co., Ltd. are not presented for the six months ended September 30, 2023, since the ratio of the sales to the total sales is less than ten hundredths.

3. The above amounts exclude consumption taxes.
4. The Group’s reportable segments are classified on a location basis (Japan, North America, and Europe).
5. Although the Group is solely engaged in handling the same types and series of precision speed reducers and its business operations fall within a single industry segment based on the similarities in the types, natures, manufacturing methods and markets of their products, the above table presents figures by product for each segment.
6. The sales results of Harmonic Winbel Inc., a subsidiary engaged in the development, manufacturing, and sales of magnetic application equipment, are classified, counted and presented as mechatronic products.

(2) Net Sales outside Japan

Net sales outside Japan for the six months ended September 30, 2023 (April 1, 2023 to September 30, 2023) are as follows:

	Europe	North America	Other regions	Total
I Net sales outside Japan (thousands of yen)	8,047,526	6,661,397	2,779,339	17,488,263
II Consolidated net sales (thousands of yen)	–	–	–	28,765,131
III Ratio of net sales outside Japan to consolidated net sales (%)	28.0	23.2	9.7	60.8

(Notes) 1. The categorization of countries or regions is based on geographical proximity.

2. Primary countries or regions that belong to each category
   (1) Europe: Germany
   (2) North America: the U.S.
   (3) Other regions: China, South Korea, Taiwan and Oceania
3. Net sales outside Japan are net sales that were recorded by the Company and its consolidated subsidiaries in countries or regions other than Japan.